GV
1024
P47
N. 8

THE LIBRARY OF CONGRESS

THE LIBRARY OF CONGRESS

Go ahead in safety

WHEN you carry HAGSTROM INSIDE TIRE SLEEVES in your tool box there is no need of carrying extra casings. The Hagstrom Sleeve fills the bill. They do not disfigure your car and, once inserted in the tires, will last thousands of miles; they positively can not creep and will build up the weak spots; saves vulcanizing, if applied in time, prevents rim cuts and blow outs; easy to insert and will save a large per cent of your tire expense. The Hagstrom Tire Sleeves are the greatest sensation of the season in the auto-tire accessory line, and is the only sleeve that has the endorsement of

our leading motorists and racing men.

Workmanship and material are carefully selected. The Hagstrom Sleeves are put up in boxes, making them convenient to carry. Ask your dealer. On sale everywhere.

HAGSTROM BROS. MANUFACTURING CO.

Works and Main Office

LINDSBORG, KANSAS

Do You Wonder that the Splitdorf Product Leads the World?

The Most Marvelous Non-Stop Automobile Run Ever Made—**10,000 miles without stopping its engine recently accomplished by a Maxwell car equipped with a**

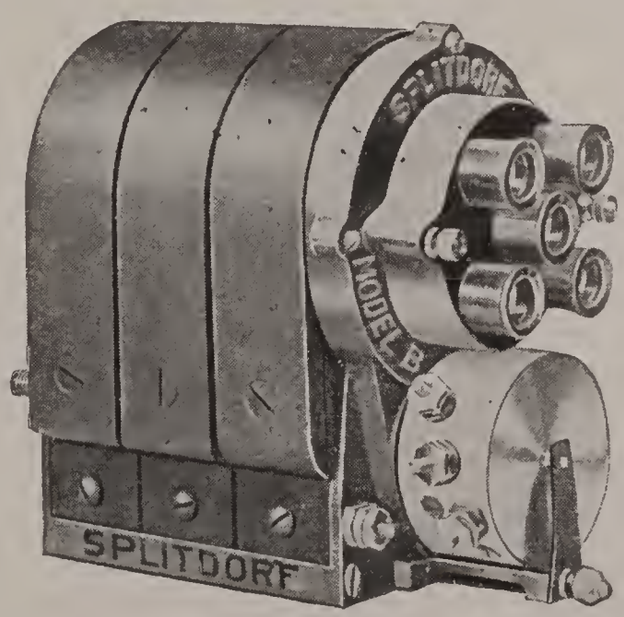
SPLITDORF MAGNETO

AND

COMMON SENSE PLUGS

Magneto and Plugs gave absolutely perfect ignition during entire run.

It is comparatively easy for any Magneto or Plug to show good results in a race of 400 or 500 miles, but a gruelling test of 25 days' continous and perfect work is a performance that proves to the utmost the efficiency and reliability of this incomparable Magneto and Plug.



The following is the last paragraph of a letter received by us from the Maxwell-Briscoe Motor Co. regarding this unparalleled feat:

"This test has conclusively proved to us that your Magneto is superior to anything we have ever used.

Yours very truly,
MAXWELL-BRISCOE MOTOR CO.
C. W. Kelsey."

Ask for Magneto catalog

CHICAGO: 319 Michigan Ave.
SAN FRANCISCO: 520 Van Ness Ave.
DETROIT: 886 Woodward Ave.
BOSTON: Motor Mart.

C. F. SPLITDORF

Walton Ave. and 138th St.
Branch, 1679 Broadway

NEW YORK

Autoline

The Perfect Lubricating Oil for All Types of Motor Cars and Motor Boats

The Oil that Saves the Motor

A supply of **Autoline** for cylinders, Greoil for transmissions and B Journal Compound for bearings on a long trip secures a maximum of efficiency and a minimum of worry.

Autoline

IF PROPERLY USED

Will Not Carbonize--Will Not Soot

Quality and uniformity guaranteed—Accept no substitute. There is nothing "Just as Good" for a motor car of any description. If your garage does not keep **Autoline**, write us and name make of your car.

Autoline

Manufactured by

Wm. C. Robinson & Son Co.

CHICAGO, ILL. TERRE HAUTE, IND. BALTIMORE, MD.
BOSTON, MASS. PHILADELPHIA, PA. PITTSBURG, PA.
CINCINNATI, O.

REFINERY AT CORAOPOLIS, PA.

First on Land, First on Sea,
First in the Hearts of All Motormen

Mosler Spit Fire PLUGS

Lead the World

USED BY THE LEADING MANUFACTURERS

MAGNETO TYPE OF ALL SIZES

Made to fit any engine, any thread.
Have heavy Genuine Iridium Platinum Points.
Can be had for the asking.

Energetic Ignition

BASE Protects Porcelain and Sparking Points
BASE acts as Condenser of Electricity
BASE Forms Compression Chamber

Greater Power

BASE Makes Plugs Spit Fire
BASE Economizes Current
BASE Facilitates Sparking

INSIST UPON THE TWO PATENTED SIDE CLEANING HOLES
—One is not enough!

We Protect our Registered Trade Mark and Patents. Dealers and Jobbers BEWARE!

Do not be deceived by any other "Fire" name.
There is only ONE GENUINE "Spit Fire" plug—that made by

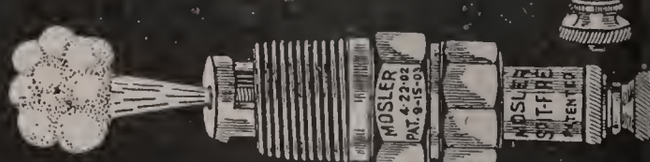
A. R. MOSLER & CO.
Originators of the "Spit Fire" principle

A TRIUMPH FOR THE SPIT FIRE

The ONLY Plugs in the WORLD that ACTUALLY Spit Fire

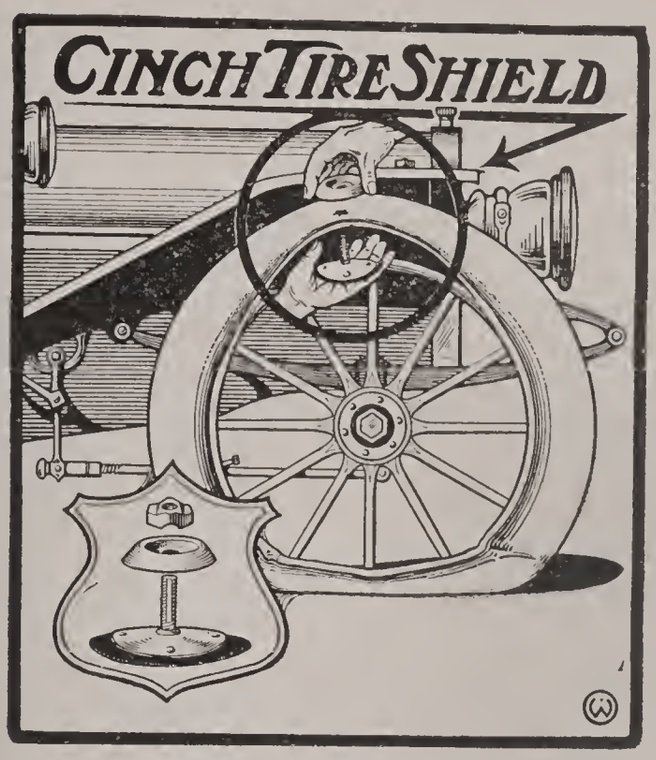
INSIST ON THE GENUINE, with Name on Porcelain and Base

A. R. MOSLER & CO 163 W 29th Street, New York



Don't Walk Home Don't Run on Flat Tires

Put on a **CINCH**



Patent Allowed

ARE YOU PREPARED FOR A BLOW-OUT?

IF NOT

GET A CINCH TIRE SHIELD

Made to fit any sized tire

Made either of LEATHER REINFORCED with STEEL or of STEEL COVERED WITH CANVAS

WHY CARRY EXTRA CASES?

Put a few Cinches in the tool box and repair any and all blow-outs

ASK FOR OUR CATALOGUE

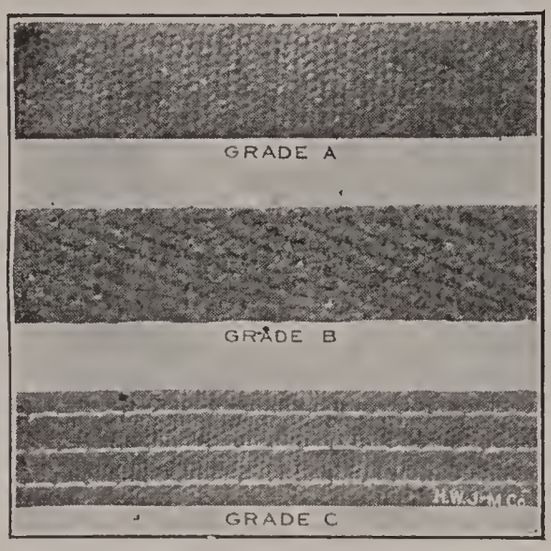
OF

AUTO NOVELTIES AND SUPPLIES INCLUDING THE MARVELOUS TARNISH PREVENTATIVE

LAWRENCE & WELCH

STERLING, ILLINOIS

For sale by all Reliable Dealers



MADE IN THREE GRADES—
Any Length or Thickness

Non-Burn Brake Lining Locked Wheels Instantly

Out of the five most largely used brake band linings recently put to an exhaustive test by Mr. J. D. Maxwell, of the Maxwell Briscoe Motor Company.

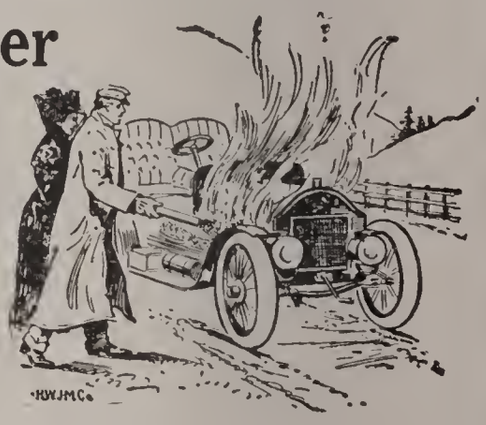
Non-Burn was the only one which locked wheels of car INSTANTLY. The lining which came nearest to this locked wheels in 12 feet.

A difference of only one foot in the stopping distance often averts a serious accident!

NON-BURN BRAKE LINING is made of pure long-fibred Asbestos with brass wires inserted. Heat from friction or oil and water do not affect it. Wears 40,000 to 50,000 miles.

Write nearest Branch for Sample and Booklet.

Manville Fire Extinguisher



is absolutely warranted to put out any fire, whether arising from gasoline, benzine, calcium carbide, or any other cause, if thrown at the base of flames when fire first starts. It is also warranted not to injure paint or the upholstering, and not to freeze, cake in the tube, corrode or deteriorate with age.

Is always ready, always sure. **Over a Half Million in Use.**

Write nearest Branch for Booklet.

Mobilene Packing Won't Blow Out

MOBILENE PACKING does not burn, char, harden and blow out like rubber, cloth and other so-called gas-engine packings. It is made of an indestructible mineral — *asbestos* — which heat does not affect.

MOBILENE also has exceptional strength because fine brass wires are intertwisted in each strand. It is pliable, compressible and easily cut. Is graphited one side and all ready to apply.

See that it is used on your auto and avoid vexatious delays. **Write nearest Branch for Sample and Booklet.**

H. W. JOHNS-MANVILLE CO.

Baltimore	Cleveland	London	New Orleans	San Francisco
Boston	Dallas	Los Angeles	New York	Seattle
Buffalo	Detroit	Milwaukee	Philadelphia	St. Louis
Chicago	Kansas City	Minneapolis	Pittsburg	

Waterhouse Carburator

No re-hashing of old methods, fundamentally new

IT HAS ONLY ONE ADJUSTMENT, THE NEEDLE VALVE, ONCE SET REMAINS FIXED FOR ALL SPEEDS

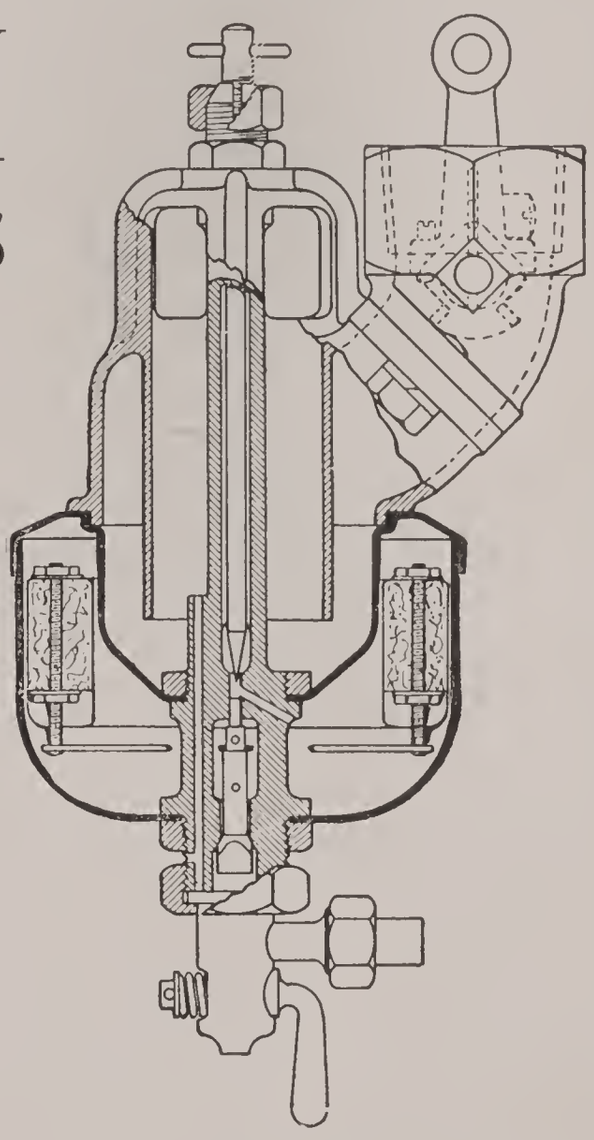
No Air Auxiliaries, no Springs and no Spray Nozzle, can't Flood.

Always primed for starting, won't choke up. Responds to the throttle instantly.

It's light in weight and very tiny.

Extremely powerful and gives absolutely no trouble.

Its price is low.



ONE-HALF ACTUAL MEASUREMENTS OF ONE INCH SIZE

Makers of the celebrated
Bemus Timers

Monitor Mfg. Co.

28 PELHAM COURT
Boston, Mass.

Manufacturers of the Famous
Monitor Distributors

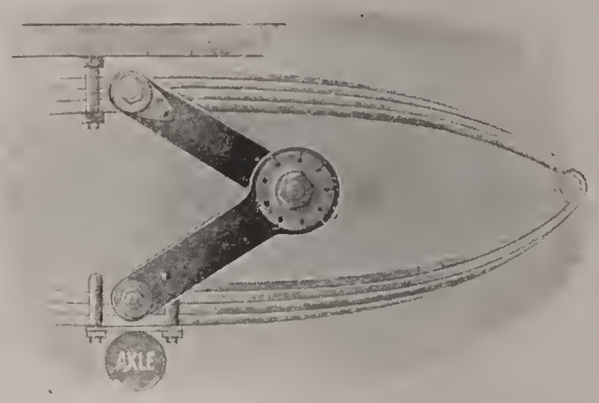
STOP *THE JAR AND SHOCK*

AND THE EVER WORKING INJURY TO YOUR CAR BY THE USE OF THE

WESTEN SHOCK ABSORBER

THE ONLY SHOCK ABSORBER MADE THAT WILL AUTOMATICALLY ADJUST THEMSELVES TO ANY LOAD OR ROAD CONDITIONS.

This absorber automatically adjusts itself to the natural position regardless of the load carried by the vehicle, and at the same time brakes the upward as well as the downward motion of the springs.



In the ordinary shock absorber the absorbing qualities are lost by the addition of extra weight, or if the car meets with an unordinary obstruction. While the vibration of the engine is in no way checked and is the cause of much wear and tear. Westen Shock Absorbers catch all vibrations at all times no matter how small or how great. The automatic adjustment within itself make them superior. After once attached to your car assurance of safety and less cost for upkeep is guaranteed, and the unpleasant sound of the nerve racking rattle of loose parts is eliminated.

You should realize at once the damage done by oscillation and equip your car with Westen Shock Absorbers. You will then be prepared to meet unexpected jolts and unseen depressions in the road and add, at the same time, comfort to the passengers of the car.

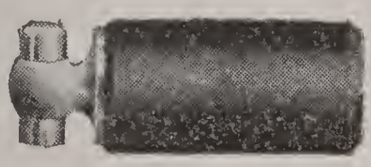
There are two friction planes which make the absorber capable of offering different degrees of resistance to the action of the vehicle springs under varying conditions.

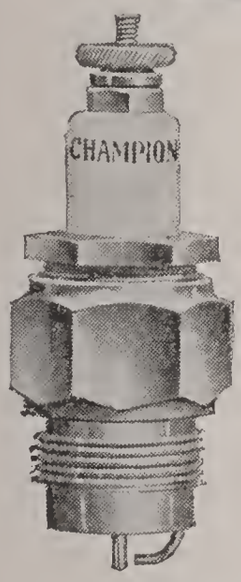
WESTEN MANUFACTURING CO.

290 HALSEY STREET

Newark, New Jersey

The Right Spark Plug is an important adjunct to any Gas Engine





In the construction of the Champion Spark Plug the utmost care is given to every detail, thus assuring the best results.

The porcelain is of the very highest quality procurable.

The centre wire is firmly cemented and baked in, thus doing away with any possible leak of compression through that source.

The shell and bushing are cut from solid stock and so designed that when assembled porcelain does not actually come in contact with either at any point, thus preventing any chance of breakage from contraction or expansion of metal.

The workmanship on parts is so good and so accurate that no matter how many times the plug is taken apart and re-assembled the porcelain is always perfectly centered.

The electrodes or points are of nickel alloy; will not oxidize; are imperforable to spark of almost any intensity; are especially adapted to use with magneto, under which use the points will not burn off as they do on so many other plugs.

The combustion chamber at lower extremity of porcelain keeps the points free from soot, and practically eliminates any necessity for cleaning.

We particularly recommend the use of Champion Plugs under severest conditions, such as very high compression, excessive oil in cylinders, with magneto, etc.

Genuine Champion Spark Plugs are manufactured only by

The Champion Company

36 Whittier Street, Boston, Mass.

This is a cash

6

60

proposition $10.00 only

Compare these sizes with other 6 volt
60 ampere Batteries

$8 \times 6\frac{1}{4} \times 9\frac{1}{8}$

Guaranteed for one year or money refunded. Made in sizes from 40 amperes up

---

MICHIGAN STORAGE BATTERY CO.

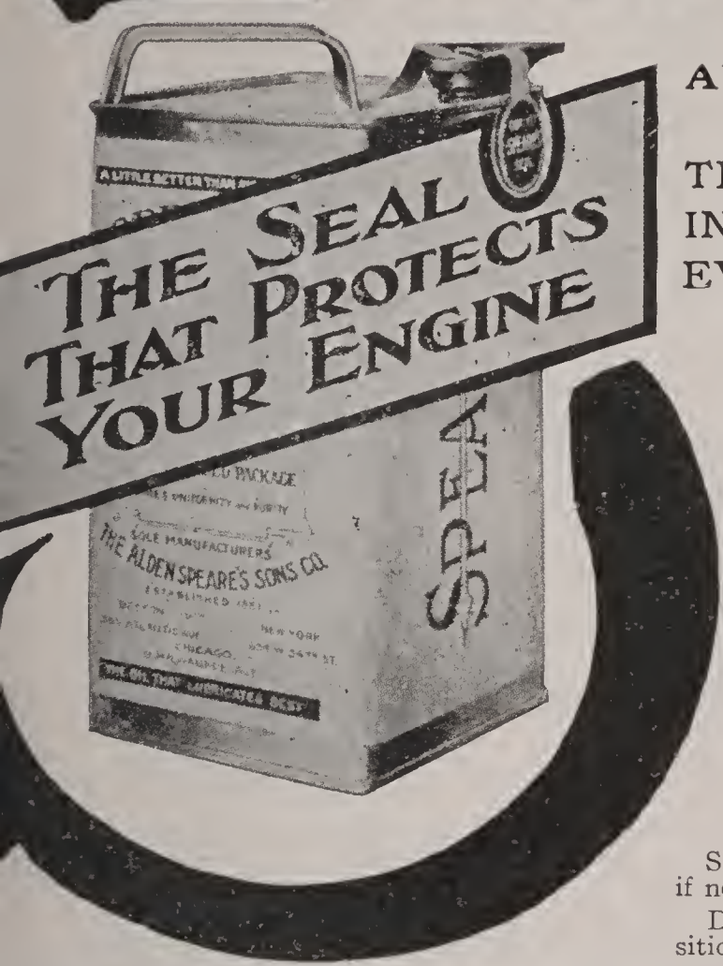
67 East Atwater Street, Detroit, Mich.

YOUR CAR CANNOT RUN EASIEST

Nor Last Longest Without the Best Lubricant

The ONE Automobile Oil and the ONE Automobile Grease you can always depend upon—that gives PERFECT SATISFACTION and reduces cost of lubrication and repair bills to a minimum is

SPEARE'S



AUTO OIL AND GREASE

THEY SAVE WEAR
INCREASE POWER and
EVERY DROP LUBRICATES

WHY?

Because they are manufactured by a firm with fifty-five years' experience in the lubricating oil business.

Speare's Body Soap
Speare's Metal Polish
Speare's Waste

are also the most economical you can buy

SPEARE'S GOODS are sold everywhere; if not, send dealer's name and write us direct.

DEALERS—Send for Speare's latest proposition.

THE ALDEN SPEARE'S SONS CO.

Established 1851

253 Broadway
New York

369 Atlantic Avenue
BOSTON, MASSACHUSETTS

21 River Street
Chicago

T. S. D. Recording Company

(Metropolitan Building)

NO. 1 MADISON AVENUE, NEW YORK

Manufacturers of best modern devices and instruments for accurately measuring **TIME, SPEED, DISTANCE,** including stops or waiting time, and permanently registering same.

Machines suitable for all kinds of vehicles—horse drawn or motor. **Especially adapted for Automobiles.**

T. S. D. Combination Recorder, containing within a highly polished brass case, securely locked, with plate glass front, a Speedometer, Odometer, Clock (eight day, full-jewelled marine movement), and recording tape sufficient for one week, on which is correctly and permanently recorded time employed, speed attained, distance travelled and stops made day or night. **Absolutely eliminates "Joy Rides."**

T. S. D. Commercial Recorder (for commercial vehicles), comprising clock and record tape, locked within a solid metal case, and giving a clear, permanent record of exact movement of vehicles, thus **preventing or minimizing speeding or loitering.**

T. S. D. Combination Recorder

Half Size

T. S. D. Speedometer and Odometer combined

T. S. D. Speedometer—singly

T. S. D. Odometer

T. S. D. Clocks

T. S. D. Taximeter or **Taxirecord** for taxicabs and vehicles for hire

Exclusive Territory To Responsible Representatives

The construction of all T. S. D. Machines embodies features which mark a distinct advance in the State of the Art, and will meet all requirements of practicability, reliability, accuracy and durability, which instruments for the service intended should possess.

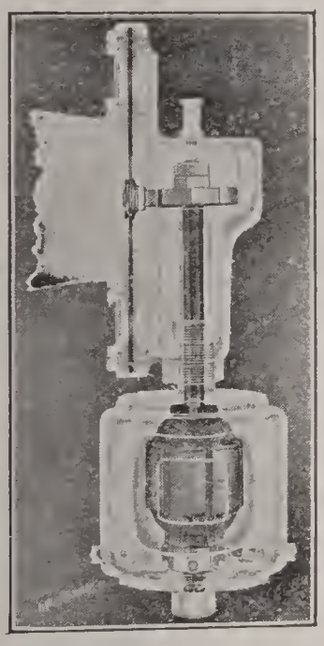
THE

KLAXON

Trade Mark Reg. Patented Mar. 31-08, Jan. 19-09 (2), Feb. 2-09, May 25-09 (3)

"THE X-RAY OF SOUND"

THE "Klaxon" is a Noise machine. It is run by an electric motor and is built to run for years :: :: :: It operates from a 6 or 8-volt storage battery or 8 dry cells. It is not a horn--reed or electric---though it looks somewhat like one :: :: ::



Sectional view of KLAXON showing relative position of motor shaft, toothed wheel and vibrating diaphragm.

Type L—Long Projector

Lovell-McConnell Mfg. Co., *Manufacturers*

365-367 Market Street, NEWARK, N. J.

The Klaxon Company

Sole Distributors for U. S. A.

1 Madison Avenue, NEW YORK

TOURISTS en route between
CHICAGO and NEW YORK

Can secure UNIFORM LUBRICATION and FREEDOM from CARBON TROUBLES, by calling for

ANTI-CARBON AUTO OIL

Made By

THE KEYSTONE REFINING CO.

COLUMBUS, OHIO

at any of the following FIRST-CLASS GARAGES along the route:

CHICAGO, ILL.
The Motor Car Supply Co., 1451-53 Michigan Ave.

HAMMOND, IND.
Hammond Garage Company

CROWN POINT, IND.
GARY, IND.
C. M. Baker

VALPARAISO, IND.
A. L. Zimmerman, 251 W. Main St.

LAPORTE, IND.
Auto Maintenance Co., 808 Monroe

LOGANSPORT, IND.
A. E. Dunn, Main Street

PERU, IND.—Adams & Sampsel

KOKOMO, IND.
J. E. Palethorpe, 20 East Sycamore

TIPTON, IND.
Tipton Garage and Machine Works

WAUSEON, OHIO
F. R. Harper

TOLEDO, OHIO
Atwood Garage, 2015 Monroe Street

FREMONT, OHIO
Fremont Auto & Repair Co., 207-09 Garrison Street

TIFFIN, OHIO
H. P. Klaiss, 123 East Market Street

BELLEVUE, OHIO—E. C. Reitz

OBERLIN, OHIO—A. P. Cook

ELYRIA, OHIO—The Auto Inn

LORAIN, OHIO
F. S. Rathwell, 425-27 Broadway

WILLOUGHBY, OHIO—Star Garage

ASHTABULA, OHIO
C. L. Scrivens Motor Co., 13 Spring Street

BUFFALO, N. Y.—Chas. E. Miller, 824 Main St.

NIAGARA FALLS, N. Y.
Niagara Falls Auto & Transit Co., 103 Main St.

BATAVIA, N. Y.—Hilte & Kennedy, 24 Main St.

ROCHESTER, N. Y.
Rochester Auto Supply Co., 375 Main Street

AUBURN, IND.
Auburn Automobile Co., 54-60 Water Street

SYRACUSE, N. Y.
Amos & Pierce Automobile Co.

ALBANY, N. Y.
Albany Garage Co., 28-30 Howard Street

NEW YORK—Chas. E. Miller, 97 Reid Street

By using the same grade of oil from start to finish you avoid the necessity of changing feed, and we are positive you can not start with a better oil, or one that will cause you LESS CARBON TROUBLE than our celebrated

ANTI-CARBON AUTO OIL

We will appreciate it if consumers will report to us any dealers who try to substitute an inferior oil for our ANTI-CARBON.

THE KEYSTONE REFINING COMPANY
COLUMBUS, OHIO

The same consistency for all seasons of the year. Not affected by severe conditions of heat and cold.

KEYSTONE GREASE

ESTABLISHED 1884

Holds the record for lowest friction and greatest test for endurance in the great plant of the William Cramp & Sons Ship and Engine Building Company, Philadelphia.

ORDER IT NEXT TIME

Has an established reputation in the power plant field for superiority and greatness. Ask any engineer anywhere.

Is not soluble in water like cheap grease.

ORDER IT NEXT TIME

The World's Greatest Lubricant

No. 1 Density (solid) for use in all grease cups—on axle bearings or wherever the use of a solid lubricant might be required.

No. 3 Density (semi-solid) for transmission, differential and timing gear cases.

KEYSTONE

Lubricating Company

Philadelphia

CHICAGO
907 Tacoma Bldg.

NEW YORK
1777 Broadway

BOSTON
Oliver Bldg.

NEW ORLEANS
612 Chartres Bldg.

Dealers and Jobbers write for our Special Proposition.

Gus Balzer Manufacturer and Manufacturers Representative

Representing

MONOGRAM CREST AND SIGN CO.

We Handle Following Goods:

Sawed and Etched Name Plates. Radiator Cap Eagles and Ornaments. Limousine Bouquet Holders.

We Make a Specialty of all Ornaments that are used on an Automobile

1777 Broadway New York

The so called Tire Problem is no Problem at all to a raft of

Goodrich Tire

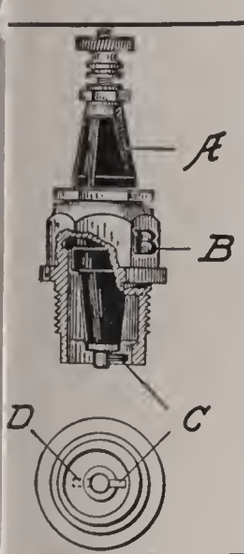
USERS

They get inexpensive pleasurable milage—and a good deal of it

The B. F. Goodrich Company

Akron, Ohio

Branches in all large Cities



The "Excentric" Mica Plug

Try it and convince yourself of its superiority. Guaranteed for one year

Mica Core Manufacturing Co.

Makers of Spark Plugs, Mica Cores, Timers and Distributers

446 E. 166th STREET NEW YORK CITY

WORCESTER IGNITION SPECIALTIES

WORCESTER COMBINATION ROTARY SWITCH

(Controller Type)

Operated by Hand or Foot

WORCESTER AUTOMOBILE AND MARINE COILS

SEND FOR CATALOG

W. H. LELAND & COMPANY

WORCESTER :: MASSACHUSETTS

PHOTO-AUTO MAPS

Photographs of every turn, together with a

Topographical Outline of Road

Showing Railroad Crossings, Bridges, School Houses and All Landmarks, with Accurate Distances Between

CHICAGO TO TOLEDO
TOLEDO TO CHICAGO

Rand McNally & Company

PUBLISHERS

166 and 168 Adams Street
CHICAGO

142 Fifth Avenue
NEW YORK

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Instructions for Using Photo-Auto Maps

The best way to use the Photo-Auto Maps is to follow the route by the topographical map and refer to the photographs only to make sure that you are turning at the right place. Use your meter at all times to get the distances between turns. The distances given between turns will vary with different machines, as a slight difference in size of tires, different conditions of the roads and many other things tend to vary the register. Three meters were used and an average taken to get the distances given. The numbers in the squares and circles give the number of the photographs at the turns and the figures outside of them give the distance to the next photograph. The compass on each plate should be used to get correct directions. This map is not drawn to scale, but is made to show the turns to the best advantage. Where turns occur close together the map is enlarged and where there is a long straight run it is condensed, so do not judge distances by the appearances of the map. Go entirely by the meter readings. Distances between closest points only are given to insure the smallest variation. The distances given are the average obtained from three different makes of speedometers and a re-check by the Warner Auto-Meter.

Copyright, 1907, by G. S. Chapin, Chicago

Copyright 1909, by Rand McNally, & Co., Chicago

Index to Towns

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CONTINUED ON NEXT PAGE

To the Motorist Who is Down on His "Tire Luck"

You don't hear the man who uses Morgan & Wright tires saying much about his "tire luck," good or bad.

After he has used a pair or two, he gets out of the habit of ascribing the completion of a trip or a tour without tire trouble to good fortune. He lays it to ***"Good Tires"***—nothing else. He knows that—take tires made as Morgan & Wright tires are, out of the highest grade of materials with a painstaking care in regard to the minutest details of construction, and give them proper care—tire service ceases to be a matter of chance.

He gets a confidence in his tire equipment that adds much to the enjoyment of his car, and a freedom from repair bills that is a big help to his bank account.

There is no truer saying in motordom than that—

MORGAN & WRIGHT TIRES

ARE GOOD TIRES

Dealers everywhere sell them at the same price you are asked to pay for other brands.

Morgan & Wright, Detroit

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Frankfort	"	217–728	28
Fredonia	"	149–660	18
Fremont	Ohio	112–618	10
Fonda	N. Y.	221–730	29
Geneva	Ohio	136–649	15
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Girard	Pa.	144–655	16
Goshen	Ind.	48–552	6
Hammond	"	14–514	2
Harbour Creek	Pa.	147–659	17
Hastings	N. Y.	277–788	36
Herkimer	"	219–729	28
Highlands	Ind.	19–519	3
Hobart	"	21–520	3
Hudson	N. Y.	245–757	32
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Ilion	"	217–728	28
Irving	"	153–662	18
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Kirkland	N. Y.	214–723	27
Kokomo	Ind.	18A–77A	203
Lakeville	"	3A–92A	201
Lapaz	"	3A–92A	201
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Ligonier	"	54–557	7
Little Falls	N. Y.	220–730	28
Macedon	"	177–689	23
Mechanicsville	"	17C–39C	402
Mentor	Ohio	133–645	14

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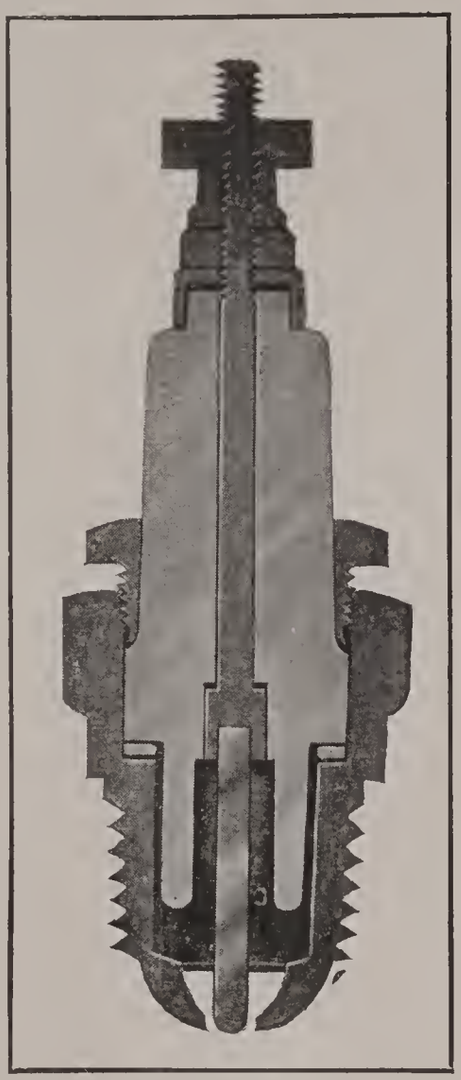

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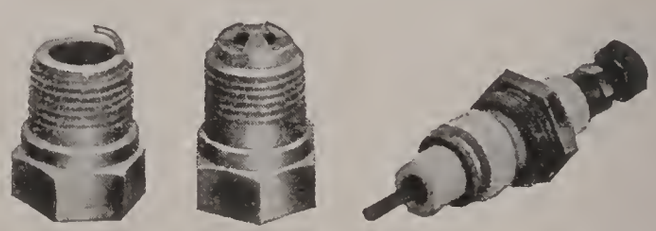

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Monroeville	Ohio	115–621	11
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Nelliston	"	221–730	29
New Carlisle	Ind	40–542	5
New Hartford	N. Y.	214–724	28
New York City	"	286–796	37
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Table of Distances Between Points

CHICAGO TO SOUTH BEND

FROM — TO	Chicago	Hammond	Highlands	Hobart	Wheeler	Valparaiso	Westville	La Porte	New Carlisle	South Bend
Chicago - - - - - - -	—	19.6	26.9	39.0	44.8	53.4	64.7	76.5	91.0	106.2
Hammond - - - - -	19.6	—	7.3	19.4	25.2	33.8	45.1	56.9	71.4	86.6
Highlands - - - - - -	26.9	7.3	—	12.1	17.9	26.5	37.8	49.6	64.1	79.3
Hobart - - - - - -	39.0	19.4	12.1	—	5.8	14.4	25.7	37.5	52.0	67.2
Wheeler - - - - - -	44.8	25.2	17.9	5.8	—	8.6	19.9	31.7	46.2	61.4
Valparaiso - - - - -	53.4	33.8	26.5	14.4	8.6	—	11.3	23.1	37.6	52.8
Westville - - - - - -	64.7	45.1	37.8	25.7	19.9	11.3	—	11.8	26.3	41.5
La Porte - - - - - -	76.5	56.9	49.6	37.5	31.7	23.1	11.8	—	14.5	29.7
New Carlisle - - - - -	91.0	71.4	64.1	52.0	46.2	37.6	26.3	14.5	—	15.2
South Bend - - - - -	106.2	86.6	79.3	67.2	61.4	52.8	41.5	29.7	15.2	—

TABLE OF DISTANCES

	South Bend	Mishawaka	Osceola	Goshen	Benton	Ligonier	Wawaka	Kendallville	Waterloo	Butler	Edgerton	Bryan	Stryker	Archbold	Wauseon	Delta	Swanton	Toledo
South Bend		4.5	10.2	24.8	32.1	42.8	49.1	61.8	76.8	84.5	91.7	103.4	112.1	119.3	129.7	140.6	146.0	173.4
Mishawaka	4.5	**P**	5.7	20.3	27.6	38.3	44.6	57.3	72.3	80.0	87.2	98.9	107.6	114.8	125.2	136.1	141.5	168.9
Osceola	10.2	5.7	**H**	14.6	21.9	32.6	38.9	51.6	66.6	74.3	81.5	93.2	101.9	109.1	119.5	130.4	135.8	163.2
Goshen	24.8	20.3	14.6	**O**	7.3	18.0	24.3	37.0	52.0	59.7	66.9	78.6	87.3	94.5	104.9	115.8	121.2	148.6
Benton	32.1	27.6	21.9	7.3	**T**	10.7	17.0	29.7	44.7	52.4	59.6	71.3	80.0	87.2	97.6	108.5	113.9	141.3
Ligonier	42.8	38.3	32.6	18.0	10.7	**O**	6.3	19.0	34.0	41.7	48.9	60.6	69.3	76.5	86.9	97.8	103.2	130.6
Wawaka	49.1	44.6	38.9	24.3	17.0	6.3		12.7	27.7	35.4	42.6	54.3	63.0	70.2	80.6	91.5	96.9	124.3
Kendallville	61.8	57.3	51.6	37.0	29.7	19.0	12.7	**A**	15.0	22.7	29.9	41.6	50.3	57.5	67.9	78.8	84.2	111.6
Waterloo	76.8	72.3	66.6	52.0	44.7	34.0	27.7	15.0	**U**	7.7	14.9	26.6	35.3	42.5	52.9	63.8	69.2	96.6
Butler	84.5	80.0	74.3	59.7	52.4	41.7	35.4	22.7	7.7	**T**	7.2	18.9	27.6	34.8	45.2	56.1	61.5	88.9
Edgerton	91.7	87.2	81.5	66.9	59.6	48.9	42.6	29.9	14.9	7.2	**O**	11.7	20.4	27.6	38.0	48.9	54.3	81.7
Bryan	103.4	98.9	93.2	78.6	71.3	60.6	54.3	41.6	26.6	18.9	11.7		8.7	15.9	26.3	37.2	42.6	70.0
Stryker	112.1	107.6	101.9	87.3	80.0	69.3	63.0	50.3	35.3	27.6	20.4	8.7	**M**	7.2	17.6	28.5	33.9	61.3
Archbold	119.3	114.8	109.1	94.5	87.2	76.5	70.2	57.5	42.5	34.8	27.6	15.9	7.2	**A**	10.4	21.3	26.7	54.1
Wauseon	129.7	125.2	119.5	104.9	97.6	86.9	80.6	67.9	52.9	45.2	38.0	26.3	17.6	10.4	**P**	10.9	16.3	43.7
Delta	140.6	136.1	130.4	115.8	108.5	97.8	91.5	78.8	63.8	56.1	48.9	37.2	28.5	21.3	10.9	**S**	5.4	32.8
Swanton	146.0	141.5	135.8	121.2	113.9	103.2	96.9	84.2	69.2	61.5	54.3	42.6	33.9	26.7	16.3	5.4		27.4
Toledo	173.4	168.9	163.2	148.6	141.3	130.6	124.3	111.6	96.6	88.9	81.7	70.0	61.3	54.1	43.7	32.8	27.4	

TABLE OF DISTANCES

	Toledo	Genoa	Woodville	Fremont	Clyde	Bellview	Monroeville	Norwalk	Townsend	Wakeman	Kipton	Oberlin	Elyria	Ridgeville	Dover	Cleveland
Toledo		14.1	19.4	33.3	42.3	49.9	58.4	63.5	70.2	74.7	82.5	88.4	97.8	102.6	109.7	123.7
Genoa	14.1	**P**	5.3	19.2	28.2	35.8	44.3	49.4	56.1	60.6	68.4	74.3	83.7	88.5	95.6	109.6
Woodville	19.4	5.3	**H**	13.9	22.9	30.5	39.0	44.1	50.8	55.3	63.1	69.0	78.4	83.2	90.3	104.3
Fremont	33.3	19.2	13.9	**O**	9.0	16.6	25.1	30.2	36.9	41.4	49.2	55.1	64.5	69.3	76.4	90.4
Clyde	42.3	28.2	22.9	9.0	**T**	7.6	16.1	21.2	27.9	32.4	40.2	46.1	55.5	60.3	67.4	81.4
Bellview	49.9	35.8	30.5	16.6	7.6	**O**	8.5	13.6	20.3	24.8	32.6	38.5	47.9	52.7	59.8	73.8
Monroeville	58.4	44.3	39.0	25.1	16.1	8.5		5.1	11.8	16.3	24.1	30.0	39.4	44.2	51.3	65.3
Norwalk	63.5	49.4	44.1	30.2	21.2	13.6	5.1	**A**	6.7	11.2	19.0	24.9	34.3	39.1	46.2	60.2
Townsend	70.2	56.1	50.8	36.9	27.9	20.3	11.8	6.7	**U**	4.5	12.3	18.2	27.6	32.4	39.5	53.5
Wakeman	74.7	60.6	55.3	41.4	32.4	24.8	16.3	11.2	4.5	**T**	7.8	13.7	23.1	27.9	35.0	49.0
Kipton	82.5	68.4	63.1	49.2	40.2	32.6	24.1	19.0	12.3	7.8	**O**	5.9	15.3	20.1	27.2	41.2
Oberlin	88.4	74.3	69.0	55.1	46.1	38.5	30.0	24.9	18.2	13.7	5.9		9.4	14.2	21.3	35.0
Elyria	97.8	83.7	78.4	64.5	55.5	47.9	39.4	34.3	27.6	23.1	15.3	9.4	**M**	4.8	11.9	25.9
Ridgeville	102.6	88.5	83.2	69.3	60.3	52.7	44.2	39.1	32.4	27.9	20.1	14.2	4.8	**A**	7.1	21.1
Dover	109.7	95.6	90.3	76.4	67.4	59.8	51.3	46.2	39.5	35.0	27.2	21.3	11.9	7.1	**P**	14.0
Cleveland	123.7	109.6	104.3	90.4	81.4	73.8	65.3	60.2	53.5	49.0	41.2	35.0	25.9	21.1	14.0	**S**

TABLE OF DISTANCES

	Cleveland	Willoughby	Mentor	Painesville	Geneva	Ashtabula	Conneaut	E. Springfield	Girard	Fairview	Erie	Buffalo
Cleveland		18.8	23.5	29.7	47.5	58.0	71.8	80.4	85.9	90.2	102.1	197.2
Willoughby	18.8		4.7	10.9	28.7	39.2	53.0	61.6	67.1	71.4	83.3	178.4
Mentor	23.5	4.7		6.2	24.0	34.5	48.3	56.9	62.4	66.7	78.6	173.7
Painesville	29.7	10.9	6.2		17.8	28.3	42.1	50.7	56.2	60.5	72.4	167.5
Geneva	47.5	28.7	24.0	17.8		10.5	24.3	32.9	38.4	42.7	54.6	149.7
Ashtabula	58.0	39.2	34.5	28.3	10.5		13.8	22.4	27.9	32.2	44.1	139.2
Conneaut	71.8	53.0	48.3	42.1	24.3	13.8		8.6	14.1	18.4	30.3	125.4
E. Springfield	80.4	61.6	56.9	50.7	32.9	22.4	8.6		5.5	9.8	21.7	116.8
Girard	85.9	67.1	62.4	56.2	38.4	27.9	14.1	5.5		4.3	16.2	111.3
Fairview	90.2	71.4	66.7	60.5	42.7	32.2	18.4	9.8	4.3		11.9	107.0
Erie	102.1	83.3	78.6	72.4	54.6	44.1	30.3	21.7	16.2	11.9		95.1
Buffalo	197.2	178.4	173.7	167.5	149.7	139.2	125.4	116.8	111.3	107.0	95.1	

TABLE OF DISTANCES

	Cleveland	Erie	Wesleyville	Harbour Creek	North East	Ripley	Westfield	Portland	Brocton	Fredonia	Sheridan	Silver Creek	Irving	Buffalo
Cleveland		102.1	106.2	110.0	117.2	126.1	133.1	140.3	141.9	148.8	154.7	160.9	164.3	197.2
Erie	102.1		4.1	7.9	15.1	24.0	31.0	38.2	39.8	46.7	52.6	58.8	62.2	95.1
Wesleyville	106.2	4.1		3.8	11.0	19.9	26.9	34.1	35.7	42.6	48.5	54.7	58.1	91.0
Harbour Creek	110.0	7.9	3.8		7.2	16.1	23.1	30.3	31.9	38.8	44.7	50.9	54.3	87.2
North East	117.2	15.1	11.0	7.2		8.9	15.9	23.1	24.7	31.6	37.5	43.7	47.1	80.0
Ripley	126.1	24.0	19.9	16.1	8.9		7.0	14.2	15.8	22.7	28.6	34.8	38.2	71.1
Westfield	133.1	31.0	26.9	23.1	15.9	7.0		7.2	8.8	15.7	21.6	27.8	31.2	64.1
Portland	140.3	38.2	34.1	30.3	23.1	14.2	7.2		1.6	8.5	14.4	20.6	24.0	56.9
Brocton	141.9	39.8	35.7	31.9	24.7	15.8	8.8	1.6		6.9	12.8	19.0	22.4	55.3
Fredonia	148.8	46.7	42.6	38.8	31.6	22.7	15.7	8.5	6.9		5.9	12.1	15.5	48.4
Sheridan	154.7	52.6	48.5	44.7	37.5	28.6	21.6	14.4	12.8	5.9		6.2	9.6	42.5
Silver Creek	160.9	58.8	54.7	50.9	43.7	34.8	27.8	20.6	19.0	12.1	6.2		3.4	36.3
Irving	164.3	62.2	58.1	54.3	47.1	38.2	31.2	24.0	22.4	15.5	9.6	3.4		32.9
Buffalo	197.2	95.1	91.0	87.2	80.0	71.1	64.1	56.9	55.3	48.4	42.5	36.3	32.9	

TABLE OF DISTANCES

	Buffalo	Batavia	Bergen	Churchville	Rochester	Pittsford	Macedon	Palmyra	Phelps	Auburn	Elbridge	Camillius	Syracuse	Albany
Buffalo		39.6	55.6	59.0	73.4	80.6	92.0	97.2	111.7	138.9	149.6	156.6	165.5	318.0
Batavia	39.6		16.0	19.4	33.8	41.0	52.4	57.6	72.1	99.3	110.0	117.0	125.9	278.4
Bergen	55.6	16.0		3.4	17.8	25.0	36.4	41.6	56.1	83.3	94.0	101.0	109.9	262.4
Churchville	59.0	19.4	3.4		14.4	21.6	33.0	38.2	52.7	79.9	90.6	97.6	106.5	259.0
Rochester	73.4	33.8	17.8	14.4		7.2	18.6	23.8	38.3	65.5	76.2	83.2	92.1	244.6
Pittsford	80.6	41.0	25.0	21.6	7.2		11.4	16.6	31.1	58.3	69.0	76.0	84.9	237.4
Macedon	92.0	52.4	36.4	33.0	18.6	11.4		5.2	19.7	46.9	57.6	64.6	73.5	226.0
Palmyra	97.2	57.6	41.6	38.2	23.8	16.6	5.2		14.5	41.7	52.4	59.4	68.3	220.8
Phelps	111.7	72.1	56.1	52.7	38.3	31.1	19.7	14.5		27.2	37.9	44.9	53.8	206.3
Auburn	138.9	99.3	83.3	79.9	65.5	58.3	46.9	41.7	27.2		10.7	17.7	26.6	179.1
Elbridge	149.6	110.0	94.0	90.6	76.2	69.0	57.6	52.4	37.9	10.7		7.0	15.9	168.4
Camillius	156.6	117.0	101.0	97.6	83.2	76.0	64.6	59.4	44.9	17.7	7.0		8.9	161.4
Syracuse	165.5	125.9	109.9	106.5	92.1	84.9	73.5	68.3	53.8	26.6	15.9	8.9		152.5
Albany	318.0	278.4	262.4	259.0	244.6	237.4	226.0	220.8	206.3	179.1	168.4	161.4	152.5	

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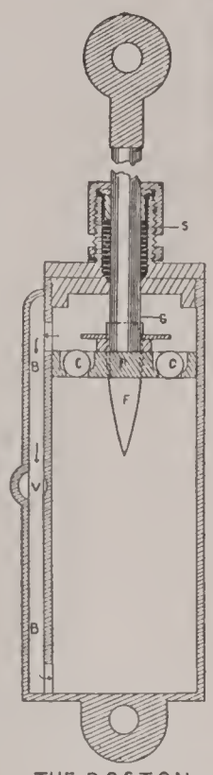

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249 W. 57th Street, New York City

MOTOR CAR SUPPLY CO.
Chicago, Ill.

JOHN S. MARTIN
Ross, Cal.

TABLE OF DISTANCES

	Buffalo	Syracuse	Fayetteville	Chittenango	Canastota	Oneida Castle	Kirkland	New Hartford	Utica	Herkimer	Little Falls	St. Johnsville	Fonda	Amsterdam	Schenectady	Albany
Buffalo	**P**	165.5	172.8	180.8	187.5	193.2	207.0	211.8	215.3	231.4	238.4	256.3	276.7	287.4	303.0	318.0
Syracuse	165.5	**H**	7.3	15.3	22.0	27.7	41.5	46.3	49.8	65.9	72.9	90.8	111.2	121.9	137.5	152.5
Fayetteville	172.8	7.3	**O**	8.0	14.7	22.4	36.2	39.0	42.5	58.6	65.6	83.5	103.9	114.6	130.2	145.2
Chittenango	180.8	15.3	8.0	**T**	6.7	12.4	26.2	31.0	34.5	50.6	57.6	75.5	95.9	106.6	122.2	137.2
Canastota	187.5	22.0	14.7	6.7	**O**	5.7	19.5	24.3	27.8	43.9	50.9	68.8	89.2	99.9	115.5	130.5
Oneida Castle	193.2	27.7	22.4	12.4	5.7		13.8	18.6	22.1	38.2	45.2	63.1	83.5	94.2	109.8	124.8
Kirkland	207.0	41.5	36.2	26.2	19.5	13.8	**A**	4.8	8.3	24.4	31.4	49.3	69.7	80.4	96.0	111.0
New Hartford	211.8	46.3	39.0	31.0	24.3	18.6	4.8	**U**	3.5	19.6	26.6	44.5	64.9	75.6	91.2	106.2
Utica	215.3	49.8	42.5	34.5	27.8	22.1	8.3	3.5	**T**	16.1	23.1	41.0	61.4	72.1	87.7	102.7
Herkimer	231.4	65.9	58.6	50.6	43.9	38.2	24.4	19.6	16.1	**O**	7.0	24.9	45.3	56.0	71.6	86.6
Little Falls	238.4	72.9	65.6	57.6	50.9	45.2	31.4	26.6	23.1	7.0		17.9	38.3	49.0	64.6	79.6
St. Johnsville	256.3	90.8	83.5	75.5	68.8	63.1	49.3	44.5	41.0	24.9	17.9	**M**	20.4	31.1	56.7	71.7
Fonda	276.7	111.2	103.9	95.9	89.2	83.5	69.7	64.9	61.4	45.3	38.3	20.4	**A**	10.7	26.3	41.3
Amsterdam	287.4	121.9	114.6	106.6	99.9	94.2	80.4	75.6	72.1	56.0	49.0	31.1	10.7	**P**	15.6	30.6
Schenectady	303.0	137.5	130.2	122.2	115.5	109.8	96.0	91.2	87.7	71.6	64.6	56.7	26.3	15.6	**S**	15.0
Albany	318.0	152.5	145.2	137.2	130.5	124.8	111.0	106.2	102.7	86.6	79.6	71.7	41.3	30.6	15.0	

WINESTOCK SPARK PLUGS

(QUICK DETACHABLE)

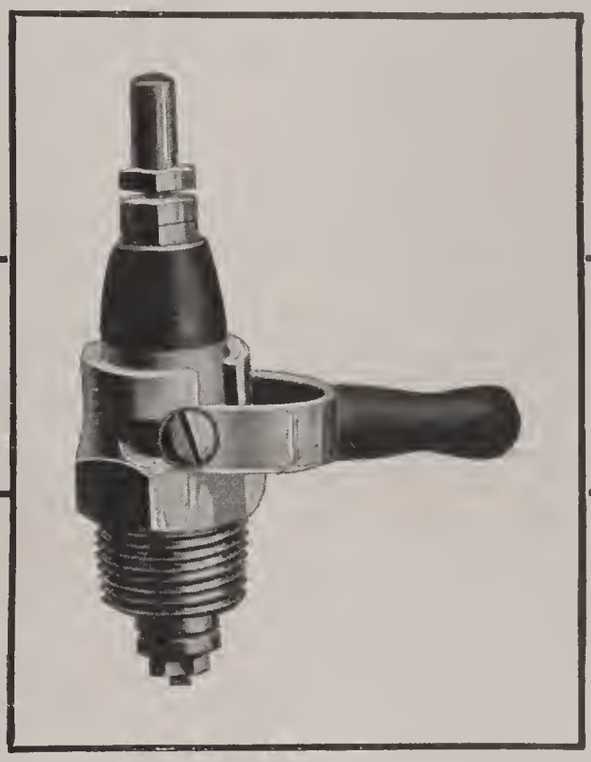
DON'T SKIP

Only quick detachable plug containing both terminals in the detachable member.

Absolutely will not leak compression

Positively will not work loose.

PRICE
$1.75



"Absolutely Guaranteed"

Gives the hottest spark of any plug made.

Non-breakable insulation.

Adjustable spark gap—once adjusted, always adjusted.

You can't imagine the convenience of a detachable plug until you have used one, it gives you a chance to examine your spark without using a wrench.

FOR SALE BY ALL FIRST-CLASS DEALERS

KNAPP-GREENWOOD COMPANY

1000 Boylston Street - - BOSTON, MASS.

TABLE OF DISTANCES

	Albany	Rensselaer	Schodack Center	Kinderhook	Stuyvesant Falls	Hudson	Blue Store	Upper Red Hook	Red Hook	Rhinebeck	Staatsburg	Hyde Park	Poughkeepsie	New York City
Albany		1.0	7.3	20.9	24.5	33.5	43.0	49.8	52.5	58.2	64.2	68.3	74.4	149.8
Rensselaer	1.0		6.3	19.9	23.5	32.5	42.0	48.8	51.5	57.2	63.2	67.3	73.4	148.8
Schodack Center	7.3	6.3		13.6	17.2	26.2	35.7	42.5	45.2	50.9	56.9	61.0	67.1	142.5
Kinderhook	20.9	19.9	13.6		3.6	12.6	22.1	28.9	31.6	37.3	43.3	47.4	53.5	128.9
Stuyvesant Falls	24.5	23.5	17.2	3.6		9.0	18.5	25.3	28.0	33.7	39.7	43.8	49.9	125.3
Hudson	33.5	32.5	26.2	12.6	9.0		9.5	16.3	19.0	24.7	30.7	34.8	40.9	116.3
Blue Store	43.0	42.0	35.7	22.1	18.5	9.5		6.8	9.5	15.2	21.2	25.3	31.4	106.8
Upper Red Hook	49.8	48.8	42.5	28.9	25.3	16.3	6.8		2.7	8.4	14.4	18.5	24.6	100.0
Red Hook	52.5	51.5	45.2	31.6	28.0	19.0	9.5	2.7		5.7	11.7	15.8	21.9	97.3
Rhinebeck	58.2	57.2	50.9	37.3	33.7	24.7	15.2	8.4	5.7		6.0	10.1	16.2	91.6
Staatsburg	64.2	63.2	56.9	43.3	39.7	30.7	21.2	14.4	11.7	6.0		4.1	10.2	85.6
Hyde Park	68.3	67.3	61.0	47.4	43.8	34.8	25.3	18.5	15.8	10.1	4.1		6.1	81.5
Poughkeepsie	74.4	73.4	67.1	53.5	49.9	40.9	31.4	24.6	21.9	16.2	10.2	6.1		75.4
New York City	149.8	148.8	142.5	128.9	125.3	116.3	106.8	100.0	97.3	91.6	85.6	81.5	75.4	

DETROIT and SOUTH BEND
OR ANYWHERE

An *abundance* of *enjoyable features* along the road, but an *over abundance* of *menacing features on the road.* Chances are a *thousand* to *one* in favor of the *menacing features* winning out — unless you squelch them.

You know that a succession of punctures and blow-outs will spoil the effect of *any trip* and ruffle the temper of a Saint—besides—tearing *big* holes in the pocket-book.

The *best* move *you* can make, *before* taking *any* trip—a block or a thousand miles—is to have your tires treated with

KEMIZITE

It Heals Punctures

The only absolute-harmless-permanent puncture healer

Guaranteed "Money Back" Basis

Clean — odorless	Only small quantity needed
Not a cement	Does not reduce resiliency
Not gummy	Does not interfere with vulcanization
Not sticky	Eliminates 75% of blow-outs
Not a filler	Increases mileage

Proportion — 5% Kemizite — 95% Air

Thousands of auto owners are using *KEMIZITE* with *absolute satisfaction.* More down right enjoyment than they ever experienced with tires before, and at greatly *decreased* expense.

This is the move for *you* to make. No matter what you *remember* of the *past—do this now.* Investigate *KEMIZITE*—satisfy yourself. Remember a "money back" guarantee goes with it.

AUTO TIRE-SECURITY COMPANY

1231 Michigan Ave. = = = = Chicago

TABLE OF DISTANCES

	New York City	Yonkers	Hastings	Dobbs Ferry	Irvington	Tarrytown	Ossining	Croton	Peekskill	Cold Spring	Fishkill Village	WappingersFalls	Poughkeepsie	Albany
New York City		14.2	18.7	20.2	21.4	24.5	30.6	34.3	42.1	53.5	62.7	67.8	75.4	149.8
Yonkers	14.2		4.5	6.0	7.2	10.3	16.4	20.1	27.9	39.3	48.5	53.6	61.2	135.6
Hastings	18.7	4.5		1.5	2.7	5.8	11.9	15.6	23.4	34.8	44.0	49.1	56.7	131.1
Dobbs Ferry	20.2	6.0	1.5		1.2	4.3	10.4	14.1	21.9	33.3	42.5	47.6	55.2	129.6
Irvington	21.4	7.2	2.7	1.2		3.1	9.2	12.9	20.7	32.1	41.3	46.4	54.0	128.4
Tarrytown	24.5	10.3	5.8	4.3	3.1		6.1	9.8	17.6	29.0	38.2	43.3	50.9	125.3
Ossining	30.6	16.4	11.9	10.4	9.2	6.1		3.7	11.5	22.9	32.1	37.2	44.8	119.2
Croton	34.3	20.1	15.6	14.1	12.9	9.8	3.7		7.8	19.2	28.4	33.5	41.1	115.5
Peekskill	42.1	27.9	23.4	21.9	20.7	17.6	11.5	7.8		11.4	20.6	25.7	33.3	107.7
Cold Spring	53.5	39.3	34.8	33.3	32.1	29.0	22.9	19.2	11.4		9.2	14.3	21.9	96.3
Fishkill Village	62.7	48.5	44.0	42.5	41.3	38.2	32.1	28.4	20.6	9.2		5.1	12.7	87.1
WappingersFalls	67.8	53.6	49.1	47.6	46.4	43.3	37.2	33.5	25.7	14.3	5.1		7.6	82.0
Poughkeepsie	75.4	61.2	56.7	55.2	54.0	50.9	44.8	41.1	33.3	21.9	12.7	7.6		74.4
Albany	149.8	135.6	131.1	129.6	128.4	125.3	119.2	115.5	107.7	96.3	87.1	82.0	74.4	

Table of Mileage

			MILES
South Bend	to	Lakeville	10.5
"	"	Lapaz	16.3
"	"	Plymouth	24.5
"	"	Argos	32.6
"	"	Rochester	44.5
"	"	Perrysburg	58.1
"	"	Mexico	63.9
"	"	Peru	69.8
"	"	Bunker Hill	78.7
"	"	Miami	82.5
"	"	Kokomo	93.0
"	"	Sharpsville	102.8
"	"	Tipton	112.5
"	"	Atlanta	118.4
"	"	Arcadia	122.0
"	"	Cicero	125.2
"	"	Noblesville	131.5
"	"	Indianapolis	155.2
Indianapolis	to	Noblesville	23.7
"	"	Cicero	30.0
"	"	Arcadia	33.2
"	"	Atlanta	36.8
"	"	Tipton	42.7
"	"	Sharpsville	52.4
"	"	Kokomo	62.2
"	"	Miami	72.7
"	"	Bunker Hill	76.5
"	"	Peru	85.4
"	"	Mexico	91.3
"	"	Perrysburg	97.1
"	"	Rochester	110.7
"	"	Argos	122.6
"	"	Plymouth	130.7
"	"	Lapaz	138.9
"	"	Lakeville	144.7
"	"	South Bend	155.2

Table of Distances

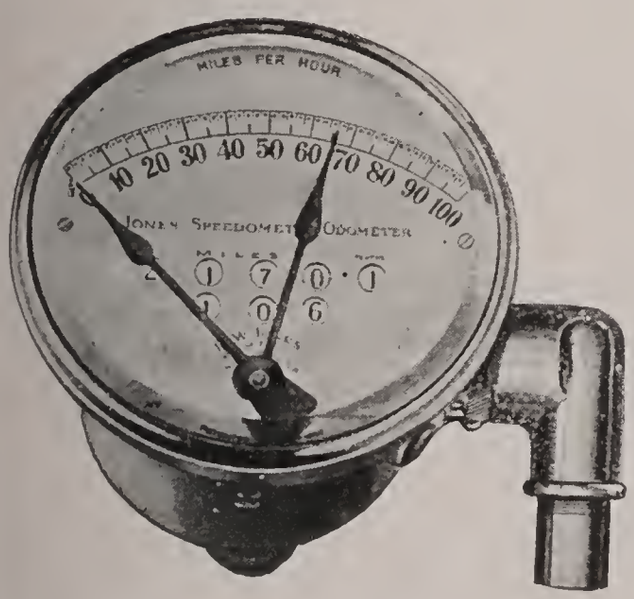
	MILES
South Bend to Lakeville	10.5
Lakeville to Lapaz	5.8
Lapaz to Plymouth	8.2
Plymouth to Argos	8.1
Argos to Rochester	11.9
Rochester to Perrysburg	13.6
Perrysburg to Mexico	5.8
Mexico to Peru	5.9
Peru to Bunker Hill	8.9
Bunker Hill to Miami	3.8
Miami to Kokomo	10.5
Kokomo to Sharpsville	9.8
Sharpsville to Tipton	9.7
Tipton to Atlanta	5.9
Atlanta to Arcadia	3.6
Arcadia to Cicero	3.2
Cicero to Noblesville	6.3
Noblesville to Indianapolis	23.7

TURN TO RIGHT AND STOP

If your car is not equipped with a reliable speed-indicator. No use touring without the famous

JONES SPEEDOMETER

The BEST speed-indicator on the market. The PIONEER. The Winner of the R. A. C. Gold Medal for ACCURACY. The Jones is indispensable when touring because—it is absolutely reliable and dependable. It is used by the majority of motorists the world over. It is part equipment of practically every car on tour. See that you have a Jones on your dash. By means of the Odometer you can compute the distance cited on the maps—and you KNOW your speed at all times under all conditions.



Write for folder containing illustrations and prices of all models.

Jones Speedometer Dept.
United Manufacturers, Inc.
Broadway and 76th Street
New York

Table of Distances

TOLEDO—DETROIT

	MILES
Toledo to Erie	11.1
" " Monroe	20.9
" " Trenton	41.7
" " Wyandotte	46.2
" " Detroit	57.0
Detroit to Wyandotte	10.8
" " Trenton	15.3
" " Monroe	36.1
" " Erie	45.9
" " Toledo	57.0
Toledo to Erie	11.1
Erie to Monroe	9.8
Monroe to Trenton	20.8
Trenton to Wyandotte	4.5
Wyandotte to Detroit	10.8

Table of Mileage

ALBANY—SARATOGA SPRINGS

	MILES
Albany to Cohoes	12.2
" " Waterford	14.2
" " Mechanicsville	22.6
" " Maltaville	28.6
" " Dunning Street	30.8
" " Saratoga Springs	38.6
Saratoga Springs to Dunning Street	7.8
" " " Maltaville	10.0
" " " Mechanicsville	16.0
" " " Waterford	24.4
" " " Cohoes	26.4
" " " Albany	38.6

Table of Distances

ALBANY—SARATOGA SPRINGS

	MILES
Albany to Cohoes	12.2
Cohoes to Waterford	2.0
Waterford to Mechanicsville	8.4
Mechanicsville to Maltaville	6.0
Maltaville to Dunning Street	2.2
Dunning Street to Saratoga Springs	7.8

VIVAX
STORAGE BATTERIES

6 VOLT 80 AMPERES
SPECIALLY BUILT FOR
LIGHTING PURPOSES

PRICE_____$24.00

WE GUARANTEE SATISFACTION

Why The "VIVAX" Excells

Mechanical Strength; Perfect Insulation; Compact and Clean; No Corrosion of Terminals; Free from Mechanical Defects, or Faulty Workmanship.

The "VIVAX" Battery is especially built to withstand the constant jar of the Automobile and may be used on the heaviest truck or the lightest pleasure Vehicle.

VIVAX IGNITION BATTERIES

6 Volt 60 Amperes_____$20.00
6 Volt Special_____ 15.00
6 Volt Junior_____ 11.50

Manufactured by

VIVAX STORAGE BATTERY CO.

2224-2234 Michigan Avenue - CHICAGO, ILLINIOS

Population of Towns

CHICAGO—SOUTH BEND

Chicago	2,049,185
Hammond . . .	15,956
Highlands . . .	25
Hobart	1,390
Wheeler	100
Valparaiso . . .	6,280
Westville . . .	468
La Porte	7,113
New Carlisle . . .	597
South Bend . . .	36,000

Population of Towns

SOUTH BEND—TOLEDO

South Bend	36,000
Mishawaka	5,600
Osceola	1,000
Dunlap	200
Goshen	7,800
Benton	200
Ligonier	2,200
Wawaka	300
Brimfield	200
Kendallville	3,400
Waterloo	1,200
Butler	2,100
Edgerton	1,000
Bryan	3,100
Stryker	1,200
Archbold	1,000
Wauseon	2,100
Delta	1,200
Swanton	900
Toledo	131,000

Population of Towns

TOLEDO—CLEVELAND

Toledo	131,000
Genoa	800
Woodville	800
Hessville	50
Fremont	8,500
Clyde	2,500
Bellview	1,000
Monroeville	1,200
Norwalk	7,000
Townsend	75
Wakeman	300
Kipton	100
Oberlin	4,000
Elyria	8,800
Ridgeville	200
Dover	50
Cleveland	381,800

Population of Towns

CLEVELAND—BUFFALO

Cleveland, O.	381,768
Willoughby, O.	1,753
Mentor, O.	624
Painesville, O.	5,024
Geneva, O.	2,342
Ashtabula, O.	12,949
Conneaut, O.	7,133
West Springfield, Pa.	203
East Springfield, Pa.	591
Girard, Pa.	691
Fairview, Pa.	327
Erie, Pa.	52,733
Wesleyville, Pa.	567
Harbour Creek, Pa.	161
North East, Pa.	2,068
Ripley, N.Y.	810
Westfield, N.Y.	2,430
Portland, N.Y.	552
Brocton, N.Y.	900
Fredonia, N.Y.	4,127
Sheridan, N.Y.	100
Silver Creek, N.Y.	1,944
Irving, N.Y.	50
Buffalo, N.Y.	352,387

Population of Towns

BUFFALO—SYRACUSE

Buffalo	352,387
Snyder	50
Williamsville	905
Clarence	670
Pembroke	310
East Pembroke	405
Batavia	9,180
Byron	342
Bergen	624
Churchville	505
North Chili	101
Rochester	162,608
Pittsford	1,000
Egypt	162
Macedon	592
Palmyra	1,937
Port Gibson	50
Phelps	1,306
West Junius	29
Magee Corners	61
Auburn	30,345
Sennett	403
Elbridge	549
Camillius	567
Syracuse	108,374

Population of Towns

SYRACUSE—ALBANY

Syracuse	117,493
De Witt	2,509
Fayetteville	1,304
Mycenae	50
Chittenango	787
Sulivan	159
Canastota	3,030
Oneida	3,420
Oneida Castle	291
Sherill	230
Vernon	380
Kirkland	132
New Hartford	1,007
Utica	62,935
Deerfield	691
West Shuyler	261
East Shuyler	108
Frankfort	2,664
Ilion	5,138
Herkimer	5,555
Little Falls	11,122
St. Johnsville	1,873
Nelliston	634
Palatine Bridge	360
Fonda	1,145
Amsterdam	23,923
Scotia	361
Schenectady	58,369
Albany	98,370

Population of Towns

ALBANY—NEW YORK CITY

Albany	98,370
Rensselaer	10,715
Schodack Center	102
Kinderhook	913
Stuyvesant Falls	792
Stockport	481
Stottville	1,069
Hudson	10,290
Blue Store	134
Upper Red Hook	75
Red Hook	857
Rhinebeck	1,449
Staatsburg	479
Hyde Park	2,873
Poughkeepsie	25,379
Wappingers Falls	3,504
Fishkill Village	589
Nelsonville	624
Cold Spring	2,067
Peekskill	10,562
Buchanan	75
Croton	100
Ossining	7,939
Tarrytown	4,770
Irvington	2,231
Dobbs Ferry	2,888
Hastings	2,002
Yonkers	61,716
New York City	4,014,304

Population of Towns

ALBANY—SARATOGA SPRINGS

Albany	98,360
Cohoes	24,183
Waterford	3,146
Mechanicsville . . .	4,695
Maltaville	92
Dunning Street . . .	50
Saratoga Springs . .	12,538

Population of Towns

SOUTH BEND—INDIANAPOLIS

South Bend	36,000
Lapaz	400
Plymouth	3,656
Argos	1,307
Rochester	3,421
Perrysburg	700
Mexico	500
Peru	11,648
Bunker Hill	568
Miami	390
Kokomo	12,019
Sharpsville	650
Tipton	3,764
Atlanta	1,500
Arcadia	1,413
Cicero	1,603
Noblesville	4,792
Indianapolis	219,154

Condensed Route of the Photo-Auto Maps

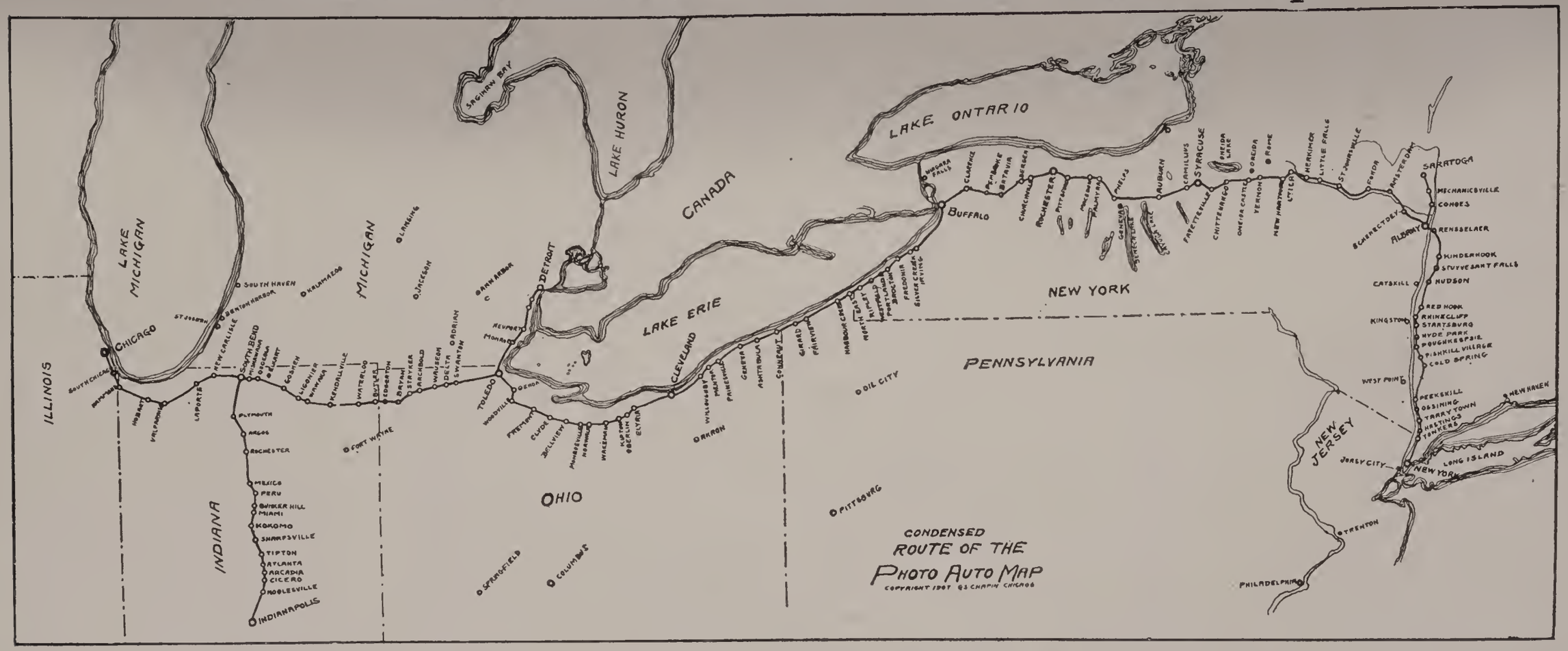


PHOTO-AUTO MAPS

No. 1

NEW SOUTHERN HOTEL

MICHIGAN AVENUE AND 13th STREET, CHICAGO, ILL.

STARTING POINT of Photo-Auto Maps in Chicago, Ill. is The New Southern Hotel, situated so convenient to "Automobile Row," it is really considered the very best Hotel in Chicago for automobile tourists. A more delightful place for visitors in Chicago could not be conceived. Their every convenience and comfort is studiously provided for. Splendid Cafe, Restaurant and Grill Rooms in connection. Good garage accommodations may be had one block south of Hotel.

Memo.....

No. 2

urn LEFT and go East from Michigan Avenue on 33rd Street. Next turn South Park Avenue, four-tenths of a mile.

Iemo .....

No. 3

urn RIGHT and go South to statue of Washington and entrance to Washington Park, two miles.

No. 4

WASHINGTON PARK

STRAIGHT AHEAD to Park Refectory Building, five-ten of a mile.

No. 5

REFECTORY BUILDING ON RIGHT.

Turn LEFT, and keep right at first three drives on l At administration buildings, with tall chimneys left, turn right and keep ahead to extreme southe corner of park; an amusement park adjoins on righ

Turn LEFT, leave park, crossing trolley on Cottage Gr Avenue, and continue due East upon Midway Dr pass under Illinois Central Railroad viaduct, strai ahead to Jackson Park. At red-tiled boat buildi ahead, upon entering park, turn right.

Jackson Park

urn LEFT, small police box on right. At next drive on left, turn right. At red-tiled rest building on right, turn right. At drive beyond building, turn left.

emo.....

.....

.....

Jackson Park

urn RIGHT to Jeffrey Avenue. Lagoon on left. Three large chimneys can be seen some distance ahead on left after leaving park; real estate sign on right. Keep straight South upon Jeffrey Avenue. Next photo two miles.

No. 6

Turn LEFT on 83rd Street. Do not cross trolley on Sou
Chicago Avenue on right. Follow 83rd Street to Ba
timore Avenue at end of street. Next photo one mile

Memo.....

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.....

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No. 7

Turn RIGHT, Baltimore Avenue. Next photo one bloc

No. 8

ırn RIGHT, Exchange Avenue. Next photo at 92d Street, South Chicago, one mile.

emo.....

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No. 9

ırn LEFT, 92d Street, South Chicago. Follow trolley to bridge. Next photo six-tenths of a mile.

No. 10

Turn RIGHT, cross bridge, follow trolley to sharp corn Avenue L. Leave trolley, keep ahead on macada looking out for high cross walks. Cross railroad East Side Station on left. Turn left one short blo then right, turning left with trolley upon Indianapo Avenue. Next photo one and two-tenths miles.

Memo .....

No. 11

Turn LEFT and go South-East. Ewing Avenue and India apolis Avenue. Next turn two and one-tenths miles.

No. 12

rn RIGHT and go South. Next turn at car barns, three and nine-tenths miles.

mo .....

No. 13

rn LEFT, East. Car barns on right, go one block East and turn to right, South, follow street car tracks to Sibley Street, Hammond, one and one-tenth miles. The Majestic Hotel Cafe is on Homan Avenue, one hundred feet north of Sibley Street, on left hand side of street. This cafe is open day and night and offers to automobile parties the parlor and toilet facilities of the Majestic Hotel which is first-class in every particular.

No. 14

HAMMOND

Turn LEFT, East. Turn left from Homan Avenue to Sibl Street. Half a block before turn, on the left side of t street is the Majestic Hotel and Cafe, the best in Hammon Next turn one mile.

Memo .....

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No. 15

Turn RIGHT, South, Lafayette School on left. Next tu one and three-tenths miles.

No. 16

ırn LEFT, East. All four corners vacant. Next turn five-tenths of a mile at ice house.

emo .....

No. 17

ırn RIGHT, South. Saloon on left at turn. Next turn two and three-tenths miles.

No. 18

Turn LEFT, East. Next turn at Highlands, two and th
tenths miles. Road to right and south leads to Cr
Point and Cedar Lake.

Memo .....

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No. 19

HIGHLANDS

Turn RIGHT, South, then East. Go one hundred feet sou
do not cross tracks, turn east passing factory and groce
Next turn seven and nine-tenths miles.

No. 20

'n LEFT, East. Follow wires. Next photo Hobart, three nd two-tenths miles.

no .....

No. 21

HOBART

rn LEFT, South. Next turn two-tenths of a mile.

No. 22

Turn LEFT, North-East. After passing R. R. depot, tur right to street's end, then to left to street's end, ther right. Next photo three and six-tenths miles.

Memo .....

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No. 23

Turn RIGHT, South. Large barn on left. Follow w Next turn one mile.

No. 24

Iake "S" turn and continue going south. Follow wires. Next photo Wheeler, six-tenths of a mile.

Iemo .....

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No. 25

WHEELER

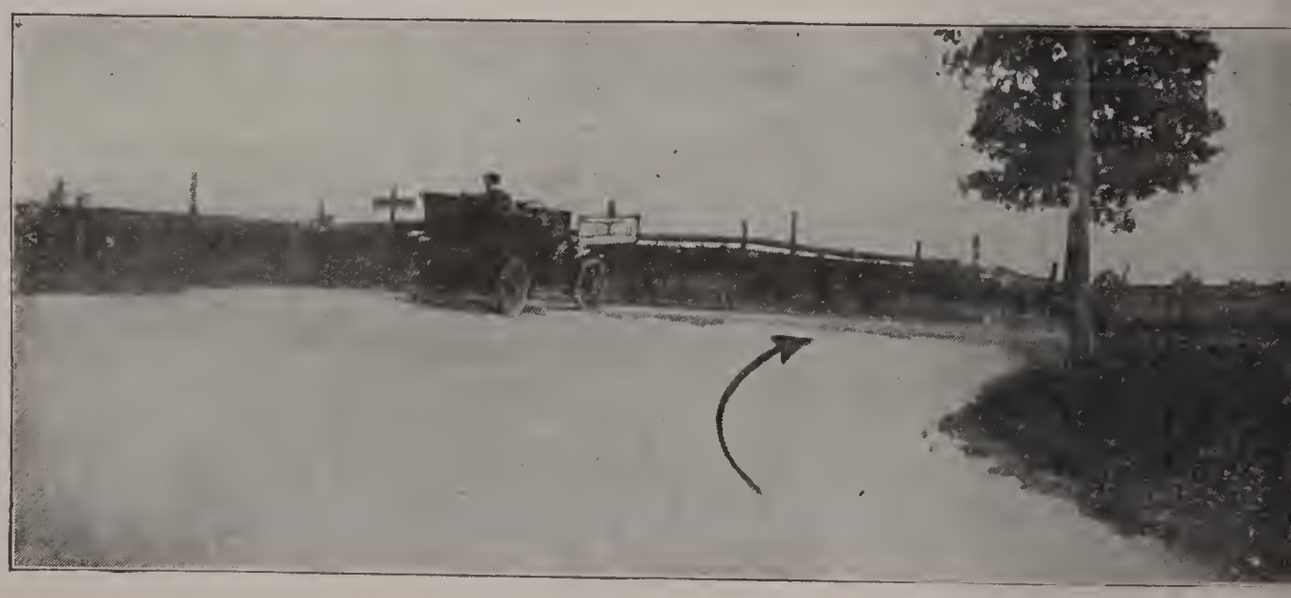
'urn LEFT, South-East. Next turn five-tenths of a mile. Reduce speed and avoid trouble with authorities.

No. 26

Turn RIGHT, leaving Wheeler on "S" turn, continuing E
Next photo four and seven-tenths miles at end of road.

Memo .....

No. 27



Turn RIGHT, South. Red barns and wind mill on rig
Next turn two and three-tenths miles at Valparaiso.

No. 28

VALPARAISO

rn RIGHT, East, Main Street, keep straight ahead through town. Next photo top of hill, one and two-tenths miles. HOTEL LAFAYETTE six tenths of a mile, on right side of street, one block this side of Court House. This hotel is the best between Chicago and South Bend. Special meal arrangements can be made by long distance telephone 991. One block before hotel is reached is Zimmerman's garage—expert machinists always ready for service. After hours ring bell on side office door.

No. 29

rn RIGHT, South, go one hundred and fifty feet to next street, then turn left and east. Next turn two and six-tenths miles.

No. 30

Turn LEFT, North-East, cross roads. Next turn one three-tenths miles, after crossing small bridge.

Memo .....

No. 31

Turn RIGHT, East, after crossing small bridge. Next ph at foot of sand hill, seven-tenths of a mile.

No. 32

RAIGHT AHEAD, East. Next photo two-tenths of a ile at top of hill.

no .....

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No. 33

e LEFT road. Next photo two miles.

No. 34

Take RIGHT hand road, North-East. Next photo le
Westville three miles.

Memo .....

No. 35

WESTVILLE

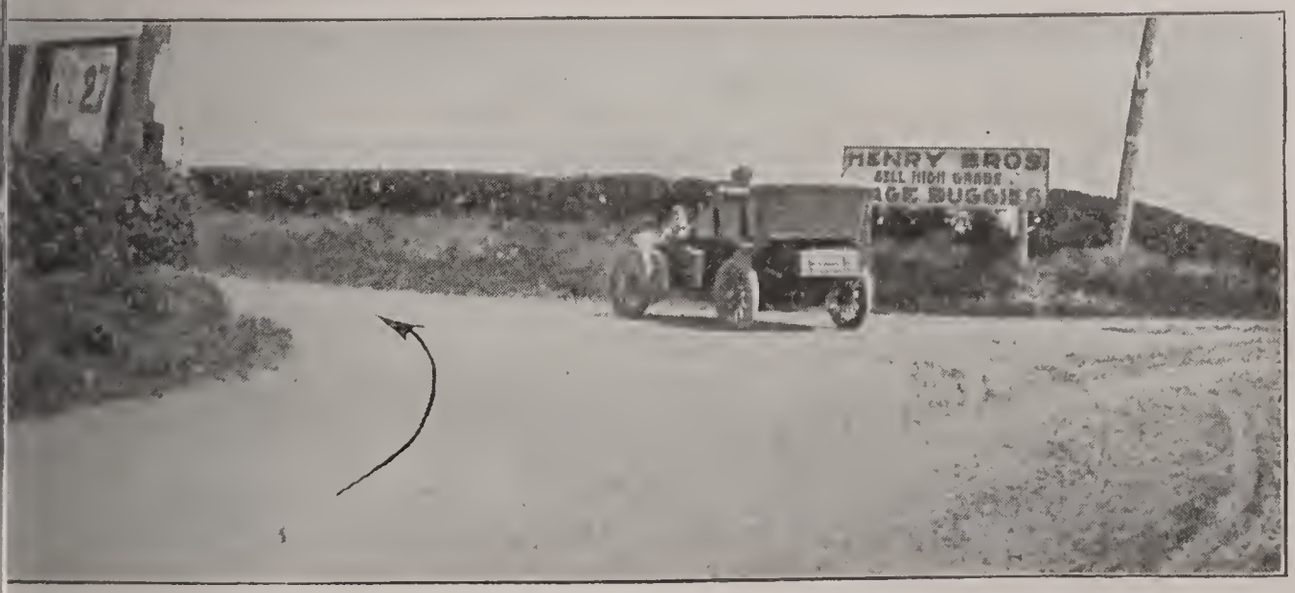
Turn RIGHT, South. Go one hundred and fifty fee
turn left and east. Next photo eight miles. The
and south road at photo 35 leads direct to Michigan

No. 36

RAIGHT AHEAD, left road. Follow poles with most wires. Next photo one and three-tenths miles.

no .....

No. 37



n LEFT, North. Follow the wires. Next photo nine-enths of a mile.

No. 38

Turn RIGHT, East. Small lake on left, half a block dist
large hole on left after turning. Go two blocks then t
left and straight ahead to Main Street. Go straight thro
town, passing Court House. Next photo three and t
tenths miles. For Automobile Maintenance Garage tur
right one block beyond Court House and go one half bl
This garage is well equipped and is open day and night.

Memo .....

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No. 39

Take LEFT hand road. Follow poles with most wires. N
photo four and five-tenths miles.

No. 40

RAIGHT AHEAD, North-East. Next photo South Bend
wenty and five-tenths miles. Before coming to South Bend
New Carlisle is passed, five and two-tenths miles. Follow
he wires.

mo .....

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No. 41

SOUTH BEND

rn RIGHT, South. Turn from La Salle Street into Main
Street, go two blocks to Hotel Oliver.

No. 42

HOTEL OLIVER, SOUTH BEND, IND.

This hotel is one of the best encountered between Chicago a New York. Every facility possible is provided for comfort of its guests. Auto parties given special attenti Next photo (No. 43) at this corner.

Memo .....

THE TWENTIETH CENTURY GARAGE

SOUTH BEND, IND.

ated one block west of Hotel Oliver, and half a block south n right-hand side of Lafayette Street. This garage is quipped with a first-class machine shop and special atten- on is given to tourists.

no .....

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No. 43

'n LEFT from Main Street into Washington Street at Iotel Oliver. Next photo two blocks.

No. 44

Turn RIGHT and South-East from Washington Street i
Vistula Avenue. Mishawaka four and five-tenths mi
Next photo seven and two-tenths miles.

Memo .....

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No. 45

Take RIGHT road at fork. Follow wires. Next photo
Osceola, two and nine-tenths miles.

No. 46

OSCEOLA

ırn RIGHT at end of road and cross tracks; then turn left and continue East. Dunlap eight and six-tenths miles. Next photo in Goshen, thirteen and seven-tenths miles.

emo .....

No. 47

GOSHEN

ırn LEFT and cross bridge. Next photo at Main Street, four-tenths of a mile.

No. 48

GOSHEN

Turn RIGHT into Main Street. Follow the car tracks. Gosh
Automobile Company garage one-half block—the best
Goshen for supplies and repairs. The Hascal Hotel c
block—this is the best hotel in Goshen. Next photo fi
tenths of a mile.

Memo .....

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No. 49

Turn LEFT and East from Main Street into Madison Stre
Next photo at end of road, six-tenths of a mile.

No. 50

urn RIGHT and South at end of road. Next photo five miles.

emo .....

No. 51

urn LEFT and South-East. Follow wires. Benton one and six-tenths miles. Next photo five and eight-tenths miles.

No. 52

Turn RIGHT and South. Follow wires. Next photo six-ten of a mile.

Memo .....

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No. 53

Turn LEFT and East. School on left of turn. Follow mo wires. Next photo in Ligonier, five and nine-tenths mil

No. 54

LIGONIER

n RIGHT and South into Main Street. Next photo at
ountain, three-tenths of a mile.

no .....

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No. 55

e LEFT street at fountain. Next photo one-tenth of
mile.

No. 56

Turn LEFT from Main Street. Next photo at end of ro
one and two-tenths miles.

Memo .....

No. 57

Turn RIGHT and South at end of road. Follow wires. N
photo two-tenths of a mile.

No. 58

LEFT and East. Follow wires. Next photo at end of
ıd, three and two-tenths miles.

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No. 59

RIGHT and South at end of road. Next photo in
awaka, one and eight-tenths miles.

No. 60

WAWAKA

Turn RIGHT and South. Red brick church on left. F
wires. Next photo seven-tenths of a mile.

Memo .....

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No. 61

Turn LEFT and East. Follow wires. Next photo at en
road, four and one-tenth miles.

No. 62

rn LEFT at end of road and cross bridge; then turn right nd continue East. Brimfield three-tenths of a mile. Next hoto six and one-tenth miles.

mo .....

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No. 63

ntinue straight EAST on right-hand road. Leave wires. Next photo one and two-tenths miles.

No. 64

Turn RIGHT into Kendallville. Next photo six-tenth
a mile.

Memo .....

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No. 65

KENDALLVILLE

Turn LEFT from Main Street into Mitchell Street. N
photo at end of street, six-tenths of a mile.

No. 66

n LEFT and North at end of street. Next photo two-
enths of a mile.

no .....

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No. 67

n RIGHT and East. Next photo three and three-tenths
iles.

No. 68

Turn RIGHT and South. Follow wires. Sedan two m
Next photo nine and four-tenths miles.

Memo .....

No. 69

Turn RIGHT and South entering Waterloo. Brick telep
station on left. Next photo, Waterloo, one mile.

No. 70

WATERLOO

n LEFT and East. Next photo at end of road, three and e-tenth miles.

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No. 71

n LEFT and go fifty feet, then turn right and continue ast. Follow wires. Next photo at end of road, one and ven-tenths miles.

No. 72

Turn LEFT at end of road and cross tracks. Follow wi
Butler three and four-tenths miles. Next photo at en
road, six and five-tenths miles.

Memo .....

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No. 73

Turn LEFT and North at end of road. Follow wires. N
photo five-tenths of a mile.

No. 74

urn RIGHT and East just after crossing tracks. Next photo at end of road in Edgerton, three and six-tenths miles.

emo .....

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No. 75

EDGERTON

urn RIGHT and cross tracks; then turn left and continue East. Next photo at end of street, three-tenths of a mile.

No. 76

Turn LEFT at end of road. Go one hundred and fifty fe
turn right and continue East. Next photo at end of ro
two and eight-tenths miles.

Memo .....

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No. 77

Turn LEFT at end of road. Go one hundred and fifty fe
turn right and continue East. Next photo five and o
tenth miles.

No. 78

rn LEFT and North. School house on right after turning.
Next photo two and one-tenth miles.

mo

No. 79

rn RIGHT and North-East. School on left. Follow wires.
Next photo in Bryan, one and six-tenths miles.

No. 80

BRYAN

Turn RIGHT and East. Church on left before turning. N
photo two blocks.

Memo .....

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No. 81

Turn LEFT into Main Street. Court House on left. Ho
Christman, the best hotel in Bryan, two blocks on the le
hand side of the street. Next photo three blocks.

No. 82

rn RIGHT and East one block north of Hotel Christman.
Next photo at end of road, eight-tenths of a mile.

mo .....

No. 83

rn LEFT and North at end of road. Next photo two-
enths of a mile.

No. 84

Turn RIGHT and North-East. Next photo two and t
tenths miles.

Memo .....

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No. 85

Turn RIGHT and East. Follow wires. Stryker four
nine-tenths miles. Next photo at end of road, eight
seven-tenths miles.

No. 86

rn LEFT at end of road. Go fifty feet, then turn right and continue East. Next photo at end of road, nine-tenths of a mile.

mo .....

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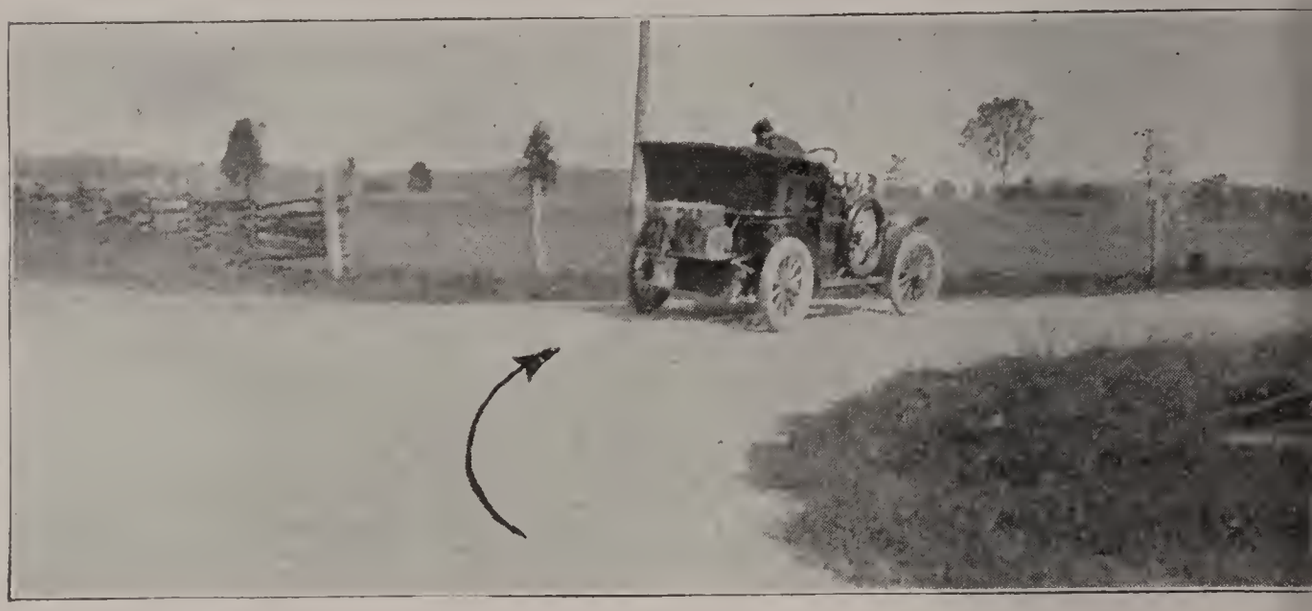
No. 87

rn LEFT and North at end of road. Next photo one and ive-tenths miles.

No. 88



Turn RIGHT and East just after crossing tracks. No photo at end of road in Archbold, one mile.

Memo .....

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No. 89

ARCHBOLD

Turn LEFT and North at end of road in Archbold. No photo one and four-tenths miles.

No. 90

n RIGHT and East. School on left of turn. Next photo
ı Wauseon, nine miles.

no .....

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No. 91

WAUSEON

n LEFT and North into Main Street. Park on right
efore turning. Next photo at end of road, one mile.

No. 92

Turn RIGHT and East at end of road. Next photo at
of road three and six-tenths miles.

Memo .....

No. 93

Turn RIGHT at end of road. Cross tracks; then turn left
continue East. Next photo one mile.

No. 94

rn LEFT and North. Schoolhouse on left, church on right. Next photo one mile.

emo .....

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No. 95

rn RIGHT and East into first road after crossing railroad racks. Delta two and one-tenth miles. Next photo entering Swanton, nine and one-tenth miles.

No. 96

SWANTON

Turn LEFT and North entering Swanton. Next photo end of road, two and nine-tenths miles.

Memo .....

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No. 97

Turn LEFT and West at end of road. Follow wires. N photo five-tenths of a mile.

No. 98

rn RIGHT and North. Follow the wires. Next photo two and eight-tenths miles.

mo .....

No. 99

rn RIGHT and East. Next photo three-tenths of a mile.

No. 100

Turn LEFT and North. Next photo one mile.

Memo .....

No. 101

Turn RIGHT and East. Large red brick church on rig
cemetery on left. Next photo sixteen and five-ten
miles.

No. 102

ırn RIGHT and South-East. Follow wires. Next photo, Toledo, three and eight-tenths miles. Atwood's garage, one of the best in the west, is on the right-hand side of the street after entering the city.

emo .....

No. 103

TOLEDO

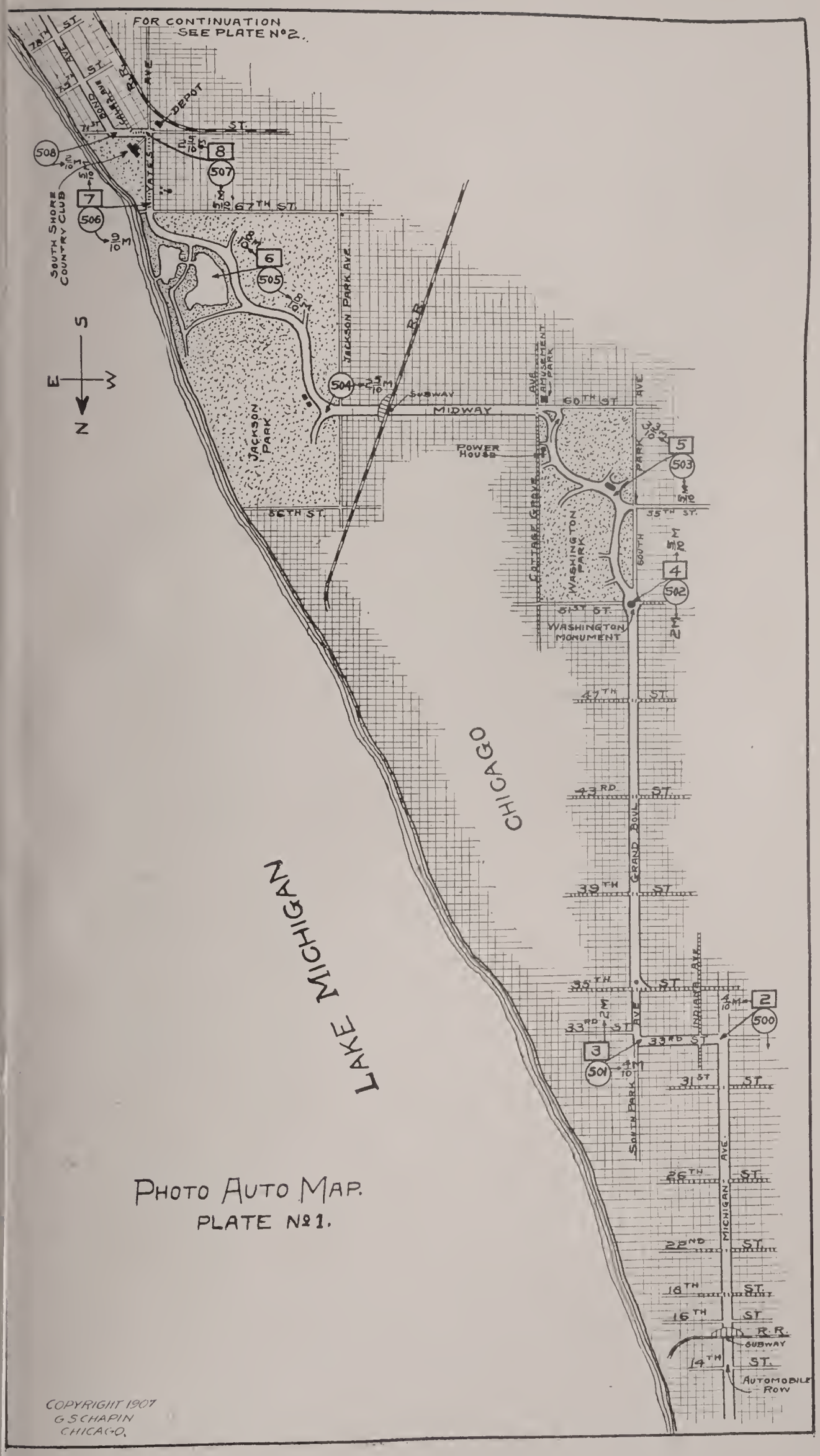
ırn RIGHT from Monroe Street into St. Clair Street. Next photo two and one-half blocks.

No. 104

THE TAVERN, TOLEDO, OHIO

STARTING POINT for run from Toledo to Clevelan This is the best Hotel in Toledo for the accommodation tourists. It is run on the European plan, with a fine Ca and Grill Room in connection. Leave the Tavern on th RIGHT. Next photo (No. 105) two and one-half blocks.

Memo .....



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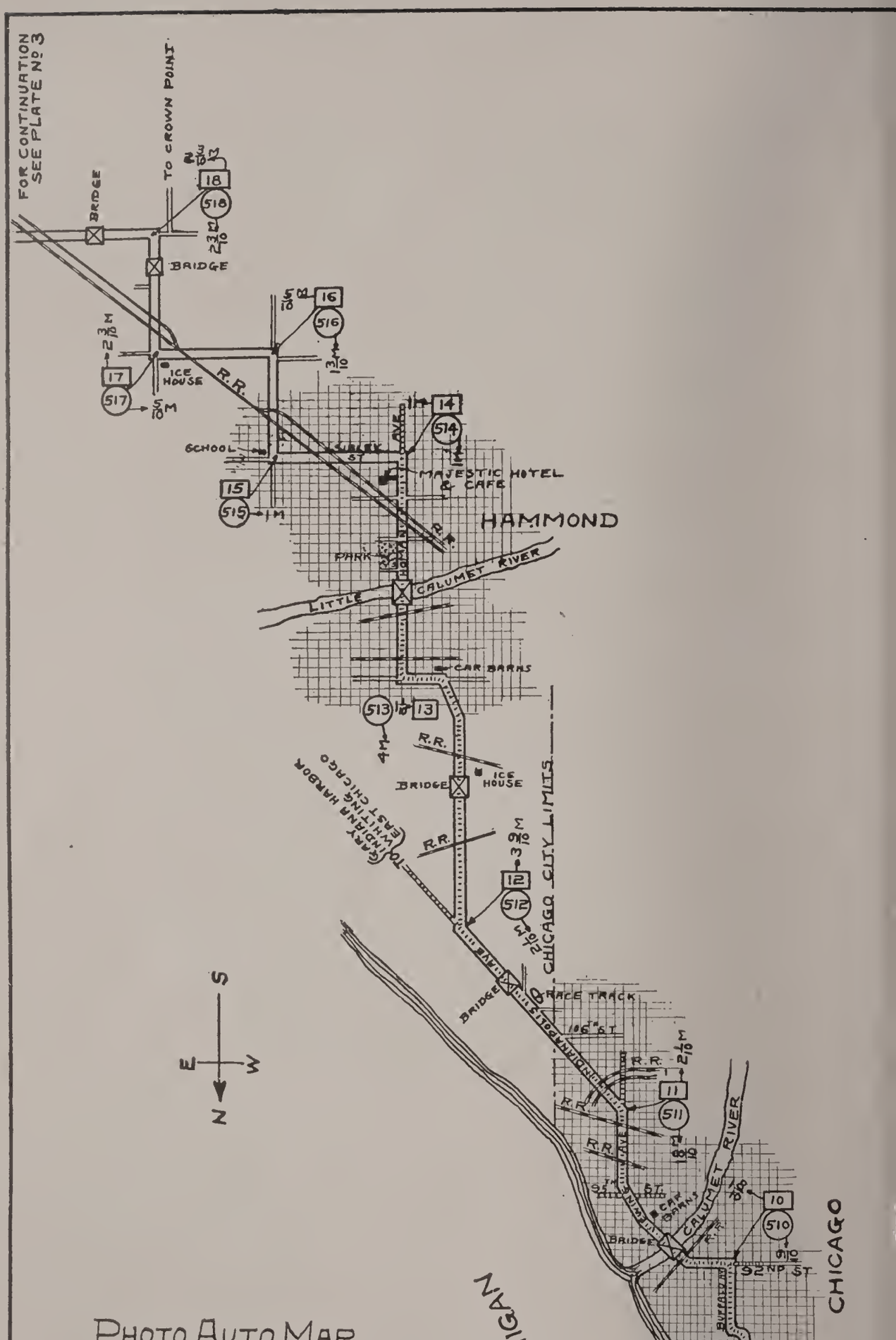

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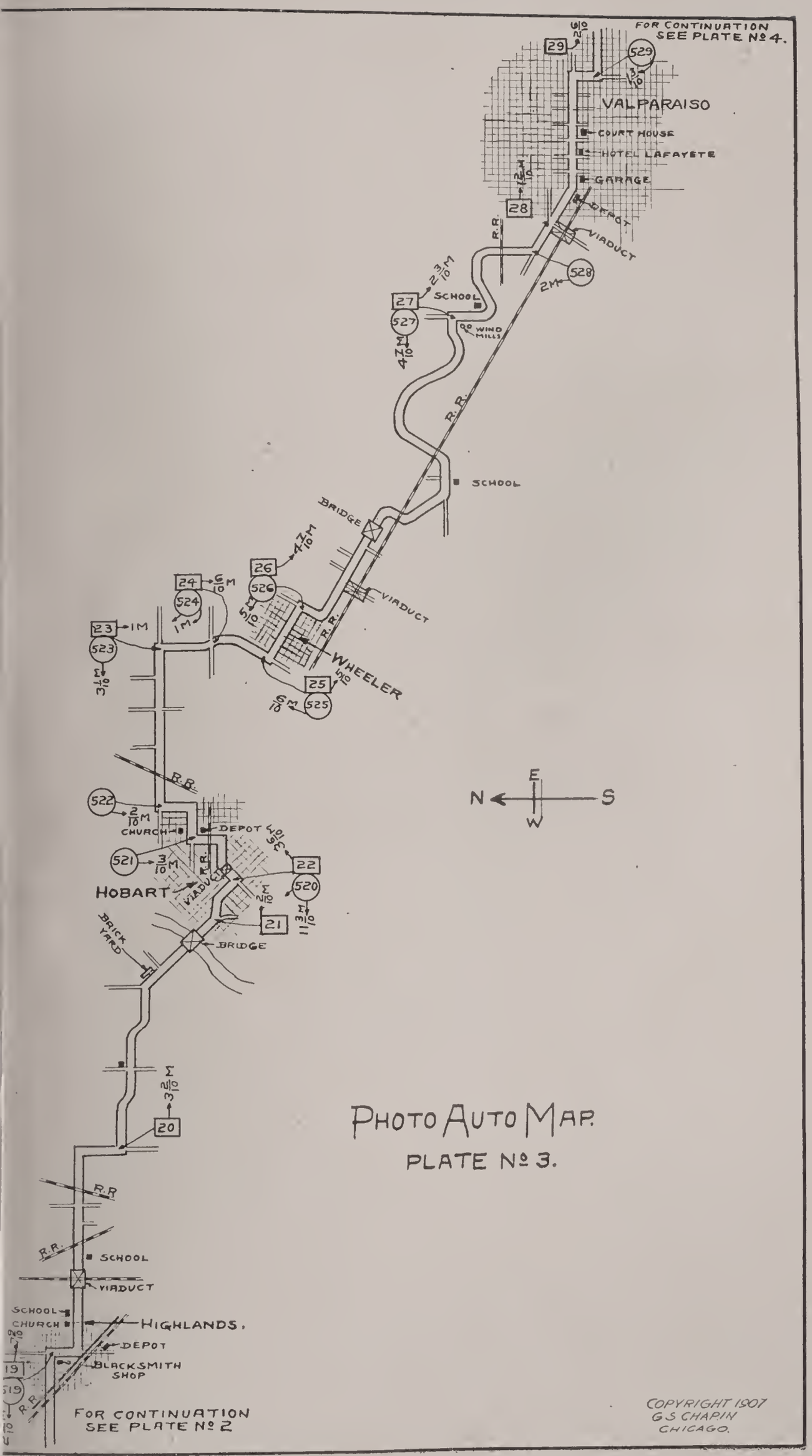

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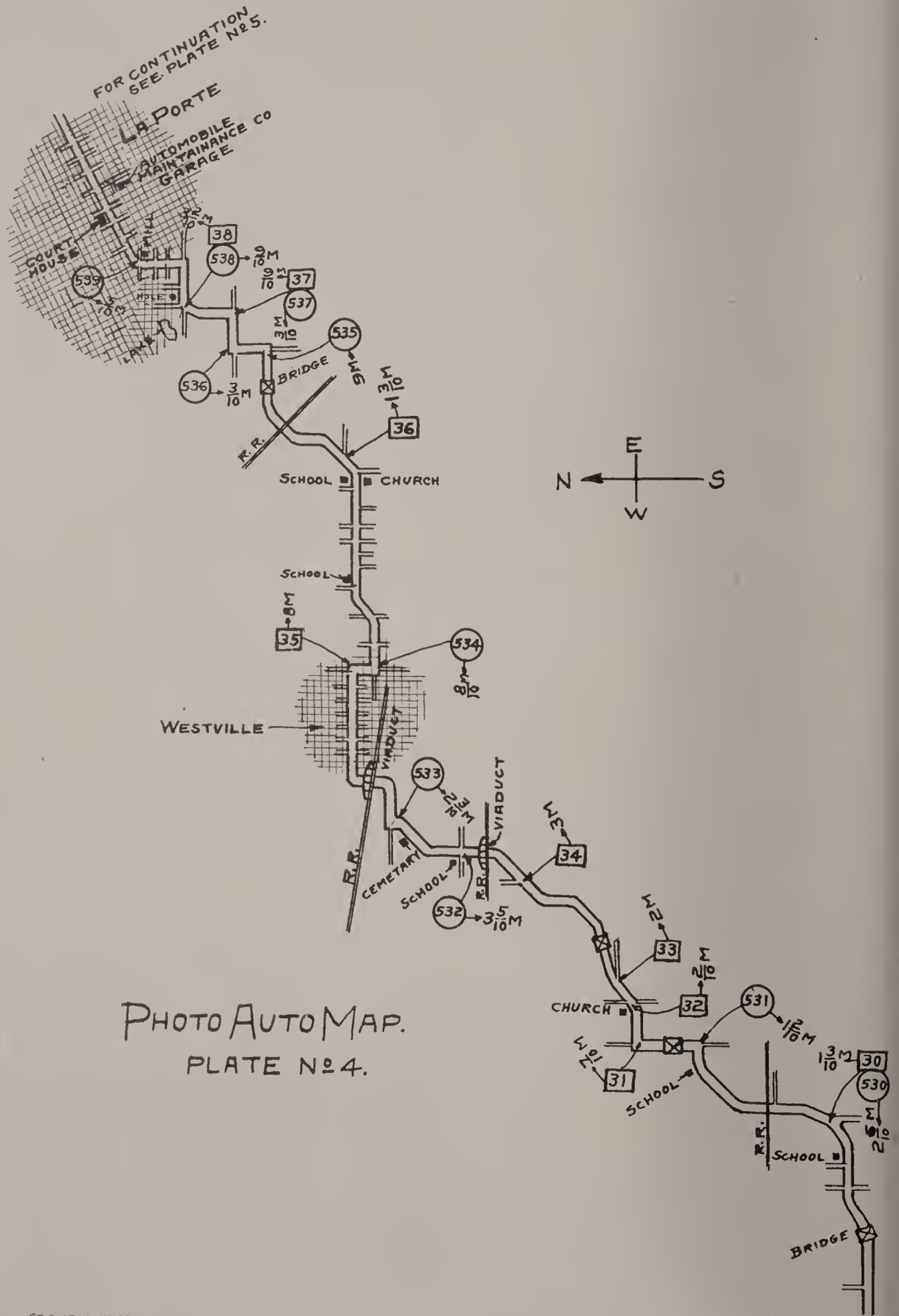

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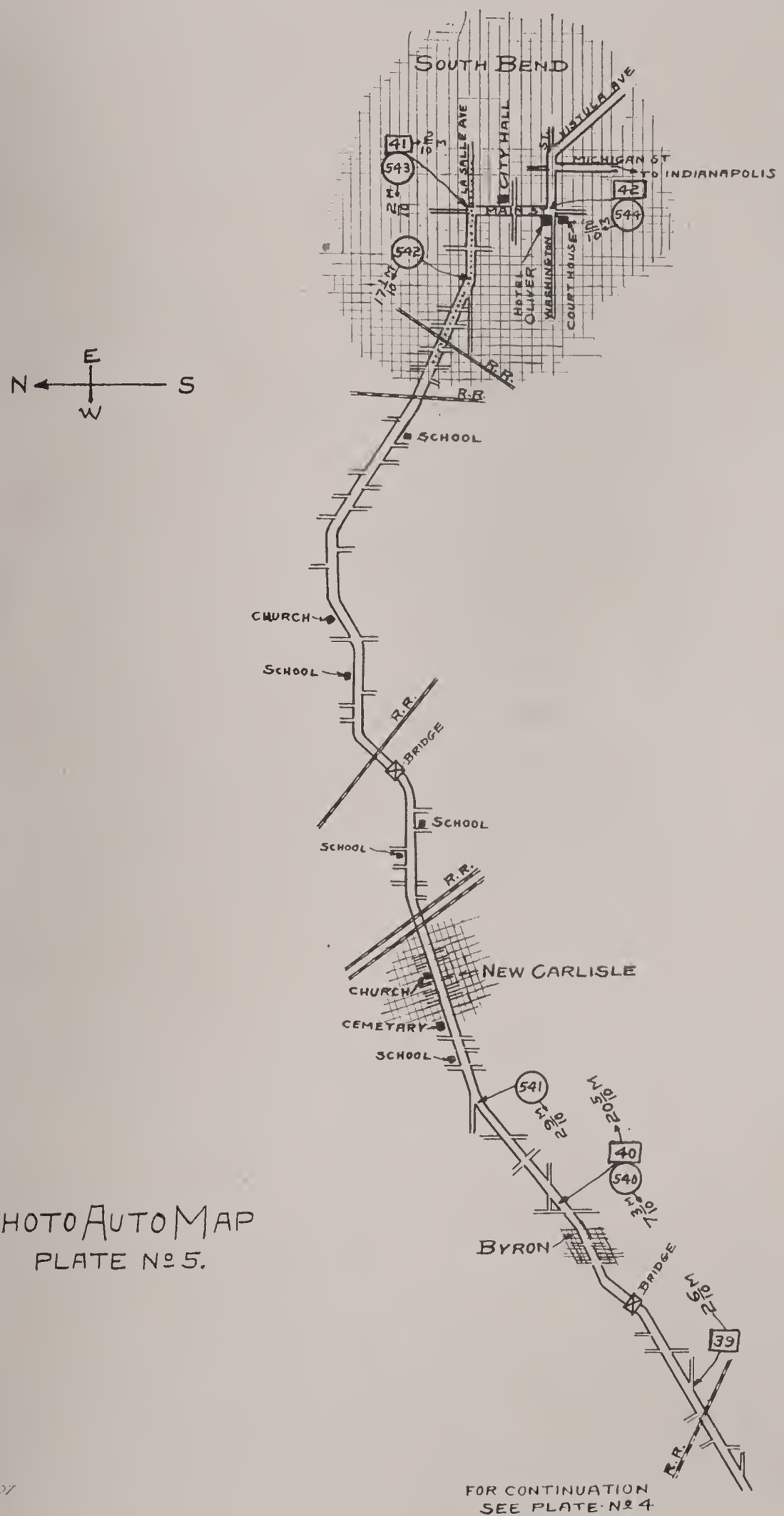

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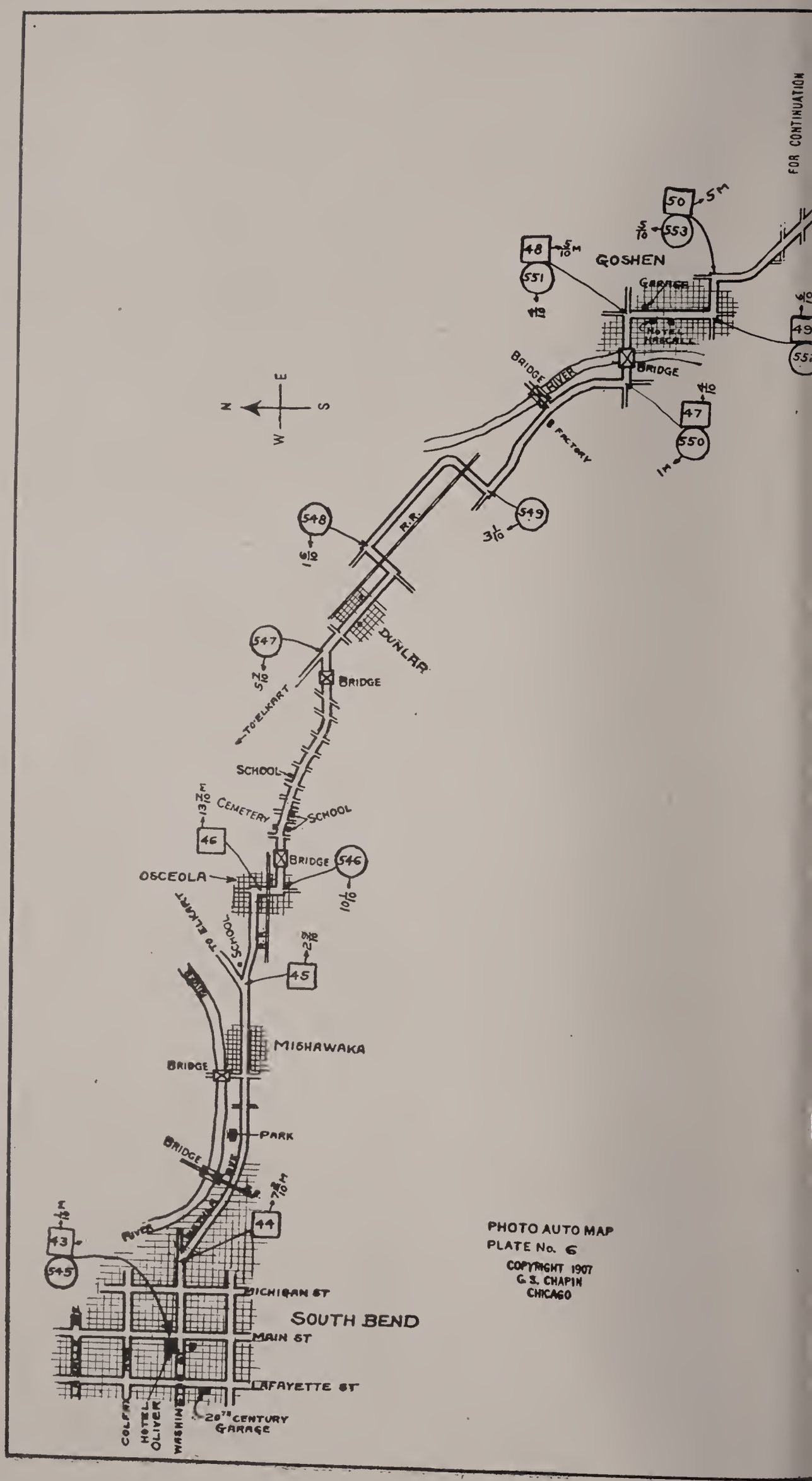
FOR CONTINUATION
GOSHEN
GARAGE
HOTEL MARCALL
BRIDGE
RIVER
FACTORY
R.R.
DUNLAP
BRIDGE
TO ELKHART
SCHOOL
CEMETERY
SCHOOL
BRIDGE
OSCEOLA
TO ELKHART
SCHOOL
MISHAWAKA
BRIDGE
PARK
BRIDGE
RIVER
MICHIGAN ST
SOUTH BEND
MAIN ST
LAFAYETTE ST
COLFAX
HOTEL OLIVER
WASHINGTON
20TH CENTURY GARAGE
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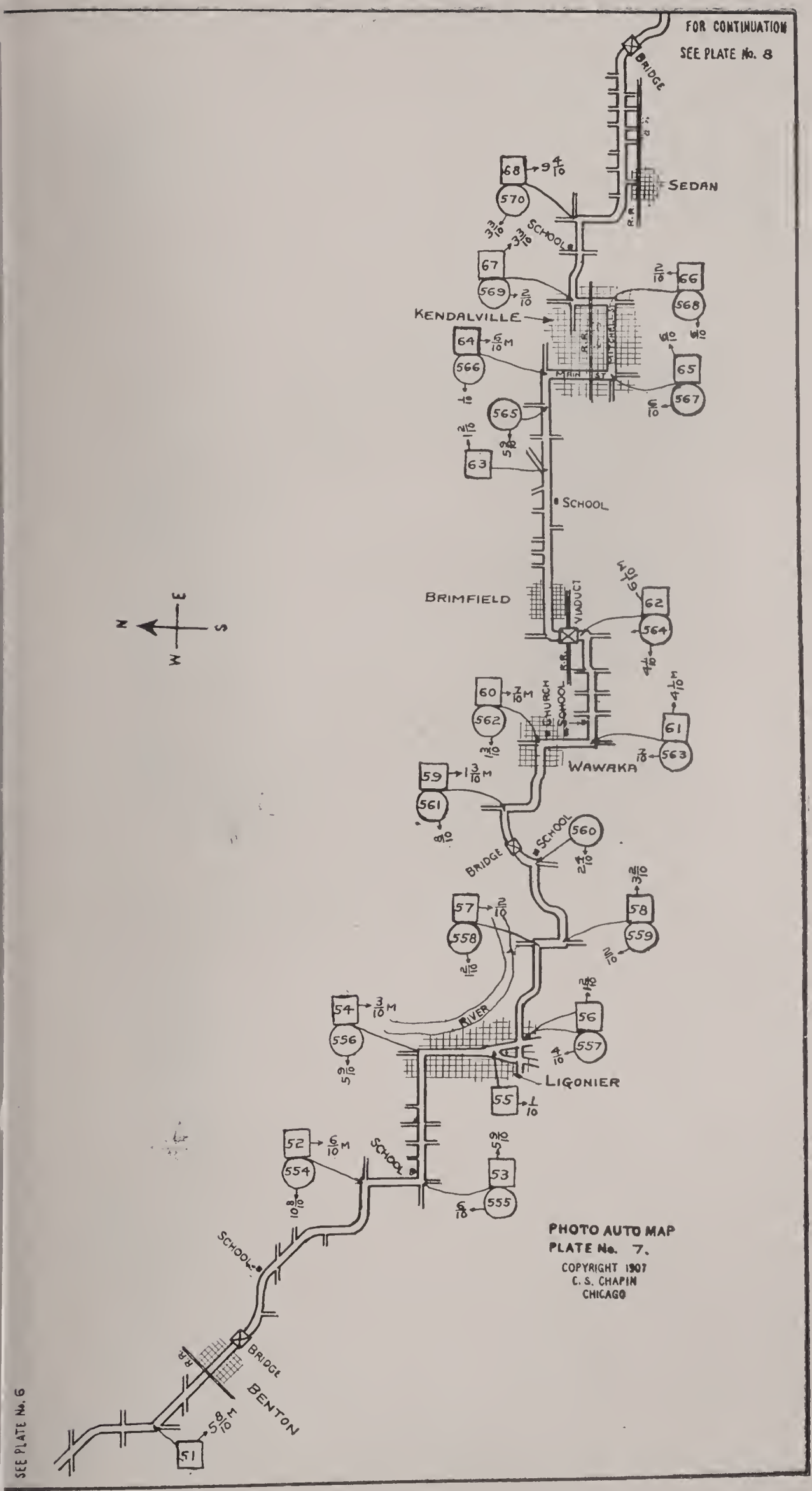

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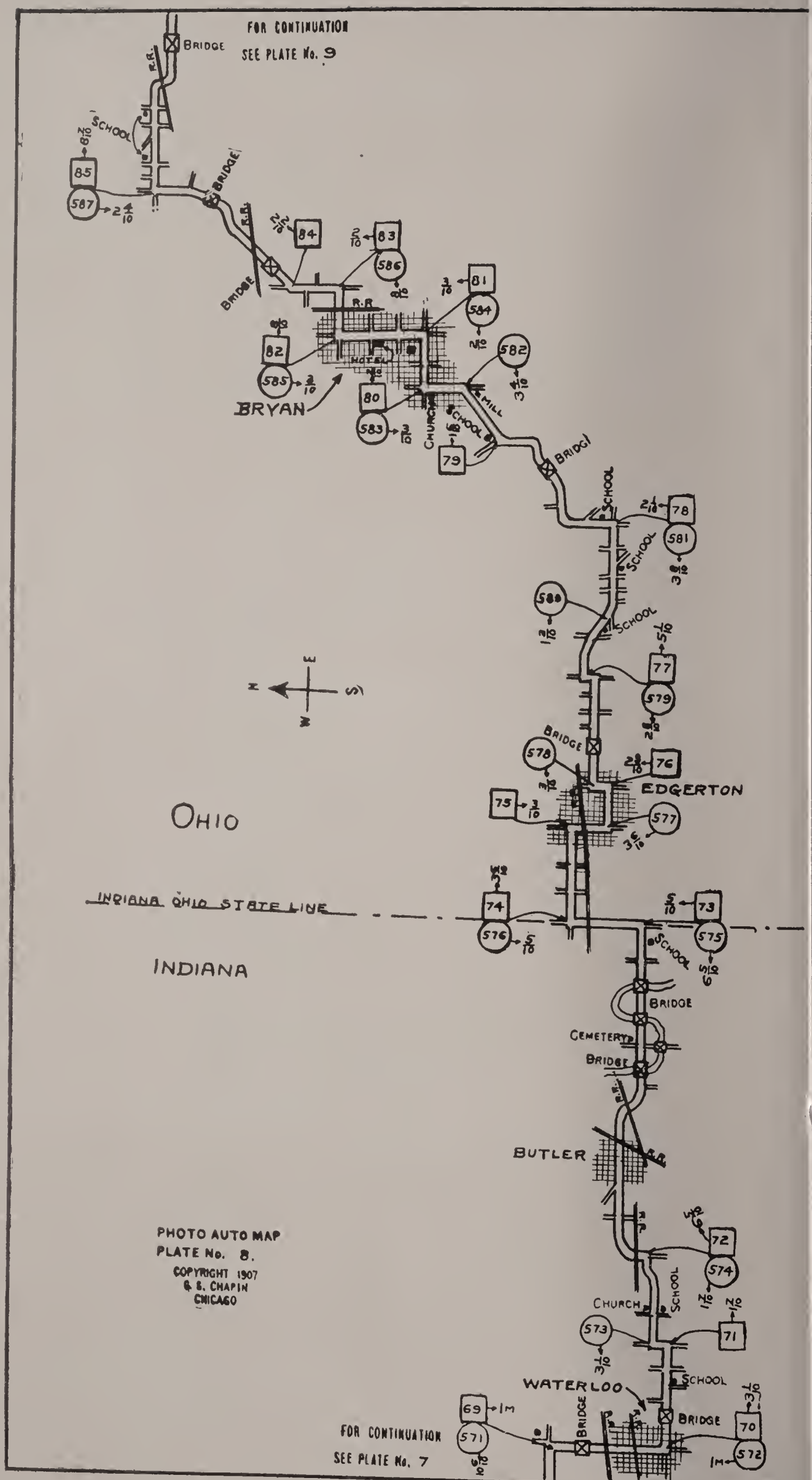

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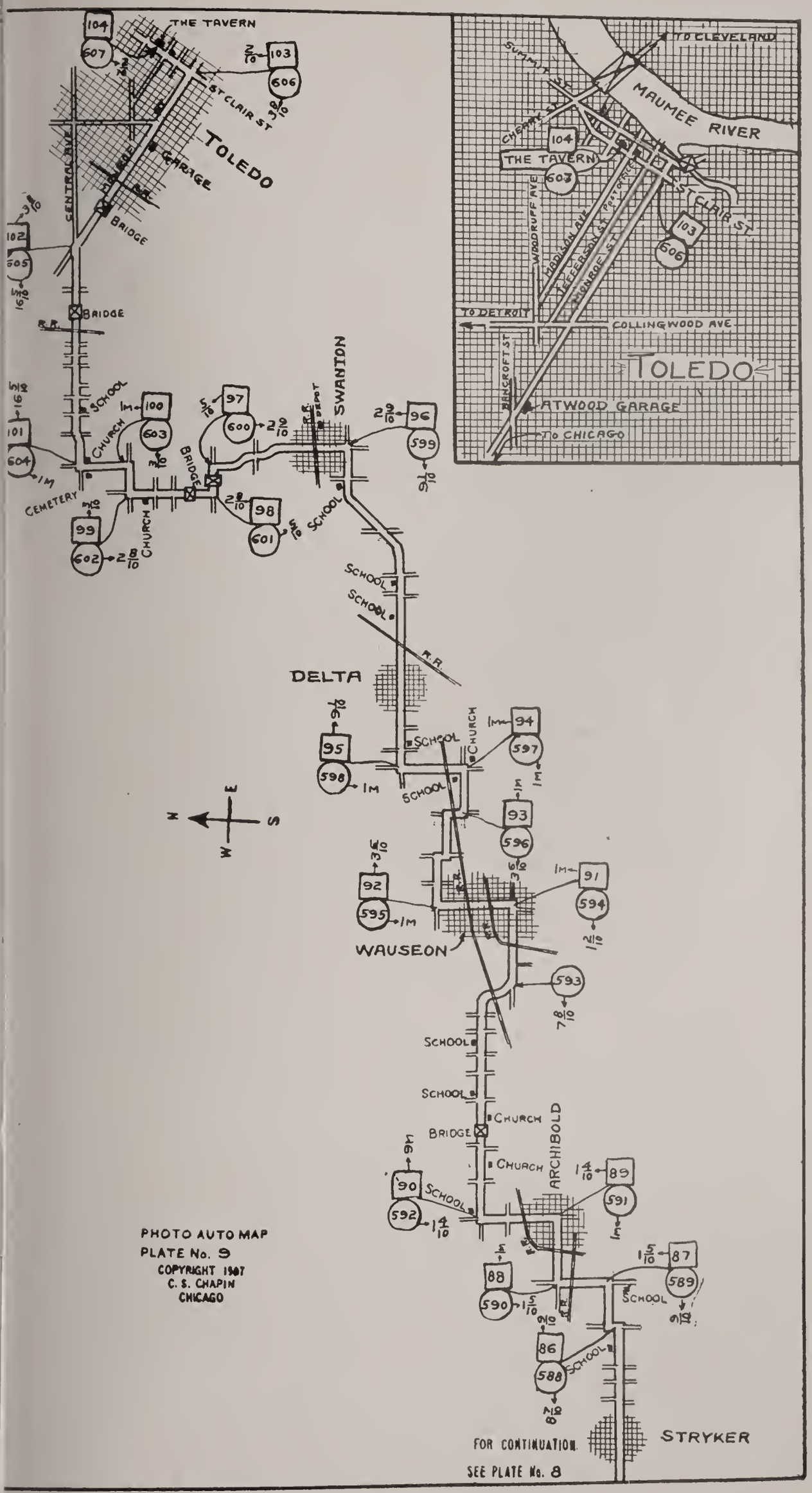

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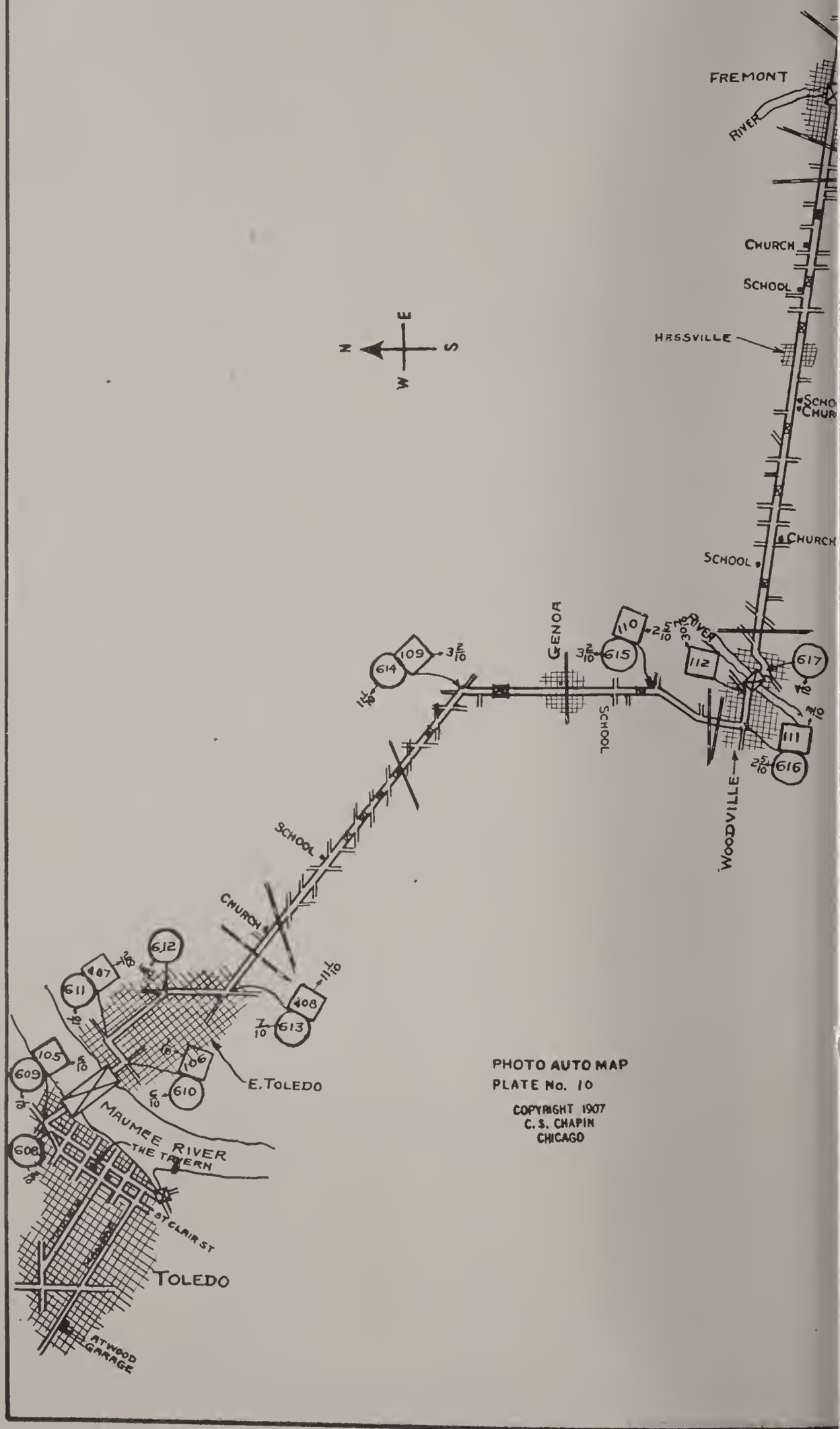

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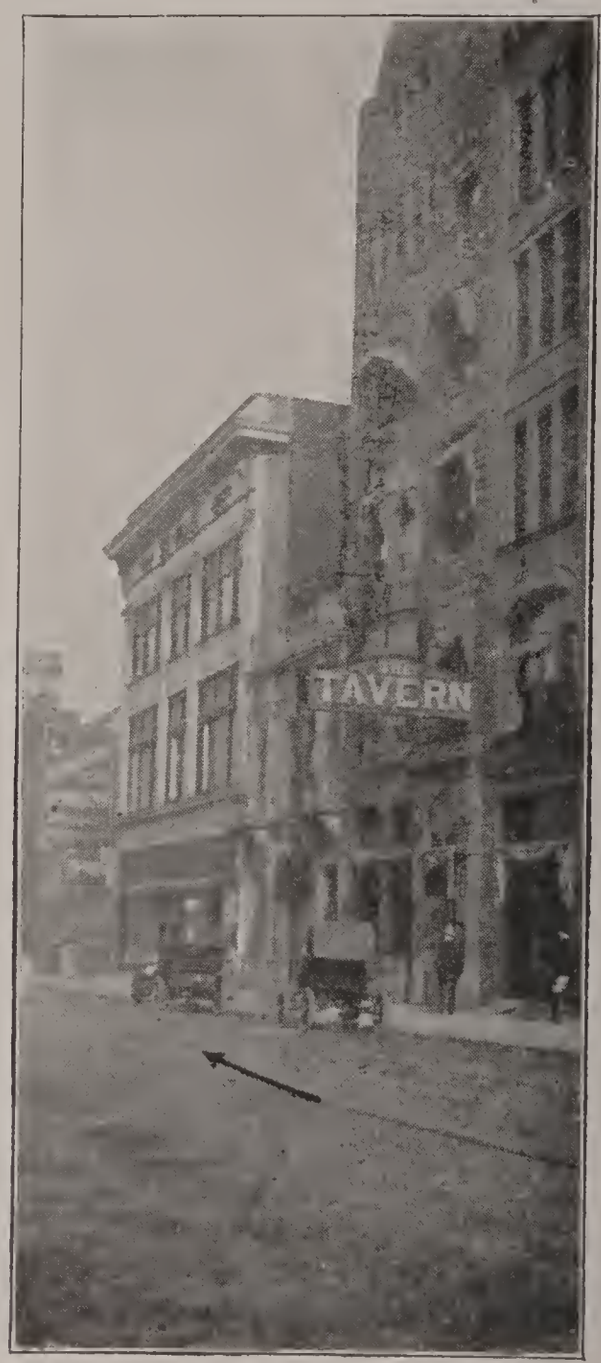
PHOTO-AUTO MAPS

Toledo to Chicago

No. 607



THE TAVERN, TOLEDO, OHIO

STARTING POINT of run from Toledo to South Bend.
hotel is the best in Toledo for the accommodation of tour
European plan, with fine cafe and grill room in connect
Leave the Tavern on the LEFT and go two and one-
blocks to next photo.

Memo .....

No. 606

n RIGHT from St. Clair Street into Monroe Street. Atwood Automobile Co. Garage on left hand side of Monroe St., one and three-quarters miles. This is one of the best Garages in the West. Next photo three and eight-tenths miles.

mo

No. 605

n LEFT and West. Follow wires. Next photo sixteen nd five-tenths miles.

No. 604

Turn LEFT and South. Church on left, cemetery on ri
after turning. Next photo at end of road, one mile.

Memo .....

No. 603

Turn RIGHT and West at end of road. Follow wires. Ne
photo three-tenths of a mile.

No. 602

rn LEFT and South. Next photo at end of road, two and eight-tenths miles.

mo .....

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No. 601

rn LEFT and East at end of road. Follow wires. Next photo five-tenths of a mile.

No. 600

Turn RIGHT and South. Follow wires. Next photo lea
Swanton, two and nine-tenths miles.

Memo .....

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No. 599

SWANTON

Turn RIGHT and West leaving Swanton. Delta six and f
tenths miles. Next photo nine and one-tenth miles.

No. 598

lirn LEFT and South. Next photo one mile.

emo .....

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No. 597

irn RIGHT and West. School on right, church on left of turn. Next photo at end of road, one mile.

No. 596

Turn RIGHT at end of road. Cross railroad tracks, turn left and continue West. Next photo three an tenths miles.

Memo .....

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No. 595

Turn LEFT and South. Next photo at end of str Wauseon, one mile.

No. 594

WAUSEON

rn RIGHT and West at end of Main Street. Park on left after turning. Next photo one and two-tenths miles.

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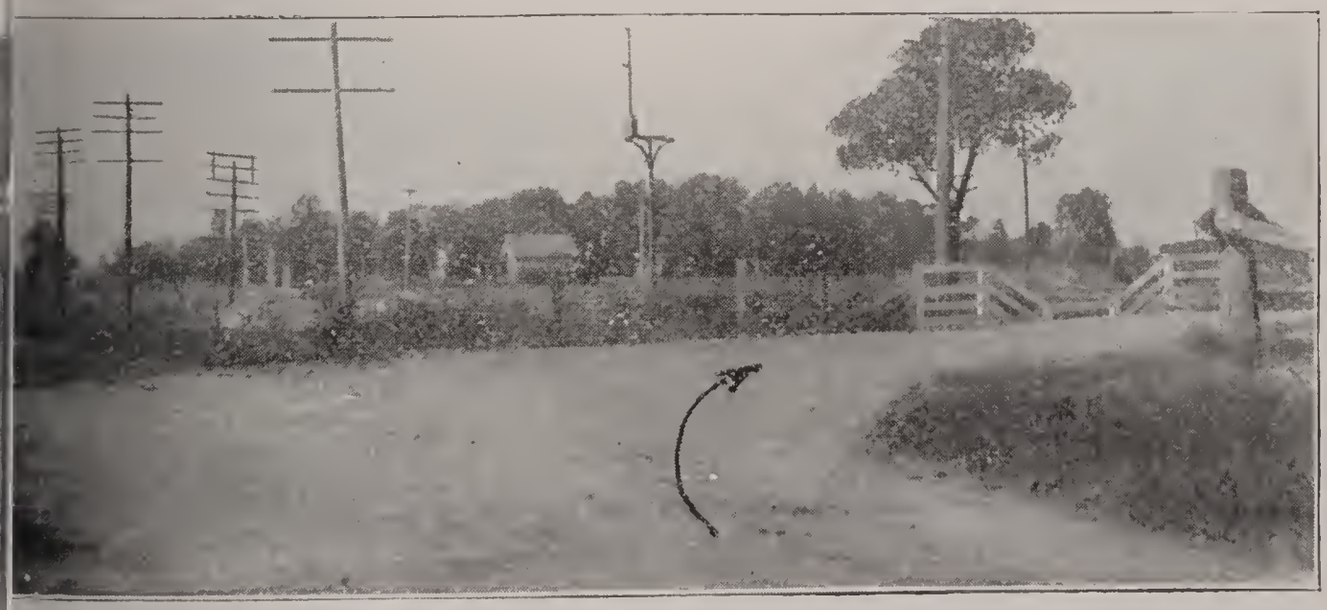
No. 593



rn RIGHT and cross tracks, then continue West. Next photo seven and eight-tenths miles.

No. 592

Turn LEFT and South. Red brick school on right. Fol
wires. Next photo in Archbold, one and four-tenths m

Memo .....

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No. 591

ARCHBOLD

Turn RIGHT and West from Main Street opposite Ho
Verniss. Next photo one mile.

No. 590

urn LEFT and South. Leave wires. Next photo one and five-tenths miles.

emo .....

No. 589

urn RIGHT and West. School on left after turning. Next photo at end of road, nine-tenths of a mile.

No. 588

Turn LEFT at end of road and go fifty feet, then turn
and continue West. Stryker three and eight-tenths m
Next photo eight and seven-tenths miles.

Memo .....

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No. 587

Turn LEFT and South. Next photo two and four-ten
miles.

No. 586

rn RIGHT and West. Next photo in Bryan, eight-tenths of a mile.

emo .....

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No. 585

BRYAN

rn LEFT and South into Main Street. Hotel Christman, the best hotel in Bryan, one block. Next photo three blocks.

No. 584

Turn RIGHT and West from Main Street. Court Hou
right. Next photo two blocks.

Memo .....

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No. 583

Turn LEFT and South. Church on right after tu
Next photo three-tenths of a mile.

No. 582

rn RIGHT and South-West. Mill on left of turn. Next photo three and four-tenths miles.

emo .....

No. 581

rn RIGHT and West. School on left before turning. Next photo three and eight-tenths miles.

No. 580

Keep to RIGHT at fork. Pass school-house on left. N
photo at end of road, one and three-tenths miles.

Memo .....

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No. 579

Turn LEFT at end of road. Go one hundred and fifty f
then turn right and continue West. Next photo at en
road in Edgerton, two and eight-tenths miles.

No. 578

EDGERTON

ırn LEFT at end of road. Go one hundred and fifty feet, then turn right and West. Next photo three-tenths of a mile.

emo .....

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No. 577

ırn RIGHT and cross railroad tracks; then turn left and continue West. Next photo three and six-tenths miles.

No. 576

Turn LEFT and South. Cross railroad tracks. Next ph
five-tenths of a mile.

Memo .....

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No. 575

Turn RIGHT and West. Follow wires. Butler three a
one-tenth miles. Next photo after crossing tracks, six a
five-tenths miles.

No. 574

rn RIGHT and West after crossing tracks. Next photo
t end of road, one and seven-tenths miles.

mo .....

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No. 573

rn LEFT at end of road. Go fifty feet, then turn right
nd continue West. Follow wires. Next photo, Waterloo,
hree and one-tenth miles.

No. 572

WATERLOO

Turn RIGHT and South entering Waterloo. Next pl
one mile.

Memo .....

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No. 571

Turn LEFT on first road after crossing bridge. Next pl
ten and six-tenths miles.

No. 570

ı LEFT and West. Follow wires. Next photo in Ken-
llville, three and three-tenths miles.

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No. 569

KENDALLVILLE

LEFT and South into East Street. Next photo two-
ıths of a mile.

No. 568

Turn RIGHT from East Street into Mitchell Street. F
wires. Next photo six-tenths of a mile.

Memo .....

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No. 567

Turn RIGHT and North from Mitchell Street into
Street. Next photo at end of road six-tenths of a m

No. 566

urn LEFT at end of road. Next photo one-tenth of a mile.

emo .....

No. 565

o STRAIGHT AHEAD and cross railroad tracks. Brimfield five and six-tenths miles. Next photo after crossing viaduct, five and nine-tenths miles.

No. 564

Turn LEFT and cross bridge; then turn right and con
West. Next photo at end of road, four and one-tenth m

Memo .....

No. 563

Turn RIGHT and North at end of road. Follow most w
Next photo in Wawaka, seven-tenths of a mile.

No. 562

WAWAKA

'n LEFT and West. Red brick church on right. Follow
'ires. Next photo one and three-tenths miles.

no .....

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No. 561

n LEFT and West. Follow wires. Next photo eight-
enths of a mile.

No. 560

Turn RIGHT and West. School on left. Follow wi
Next photo at end of road, two and four-tenths miles.

Memo .....

No. 559

Turn RIGHT and North at end of road. Follow wi
Next photo two-tenths of a mile.

No. 558

ırn LEFT and West. Follow wires. Next photo Ligonier, one and two-tenths miles.

emo .....

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No. 557

LIGONIER

ırn RIGHT and North. Next photo four-tenths of a mile.

No. 556

Turn LEFT and West from Main Street. Next photo and nine-tenths miles.

Memo .....

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No. 555

Turn RIGHT and North. School house on right. Foll most wires. Next photo at end of road, six-tenths of a m

No. 554

LEFT and West at end of road. Follow wires. Benton
ır and two-tenths miles. Next photo entering Goshen,
ı and eight-tenths miles.

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No. 553

LEFT and West. Next photo in Goshen, six-tenths
, mile.

No. 552

GOSHEN

Turn RIGHT and North into Main Street. Next photo
tenths of a mile. Hotel Hascal, the best in Goshen, opp
square on left side of Main Street. Goshen Automobil
opposite Hotel Hascal.

Memo .....

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No. 551

Turn LEFT from Main Street. Follow car tracks. N
photo after crossing bridge, four-tenths of a mile.

No. 550

RIGHT into first street after crossing bridge. Next
oto one mile.

No. 549

RIGHT and North. Next photo three and one-tenth
es.

No. 548

Turn LEFT and cross railroad tracks; then turn right a
continue along tracks. Dunlap one mile. Next pho
one and six-tenths miles.

Memo .....

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No. 547

Turn LEFT and West. Next photo Osceola, five and seve
tenths miles.

No. 546

OSCEOLA

RIGHT; cross railroad tracks, then turn left and con-
ue West. Mishawaka five and eight-tenths miles. Next
oto South Bend, ten and one-tenth miles.

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No. 545

RIGHT from Washington Street into Main Street. Hotel
ver (photo No. 544) at this corner.

No. 544

HOTEL OLIVER, SOUTH BEND, IND.

This hotel is one of the best encountered between Chicag
New York. Every facility possible is provided fo
comfort of its guests. Auto parties given special atter
Next photo (No. 543) two blocks.

Memo .....

TWENTIETH CENTURY GARAGE

SOUTH BEND, IND.

cated one block WEST of Hotel Oliver and half a block South on Lafayette Street. This garage is equipped with a irst-class machine shop, and special attention is given to ourists.

mo

No. 543

Turn LEFT, West. Turn from Main Street into La S
Street, two blocks from the Hotel Oliver. Next turn t
tenths of a mile.

Memo .....

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No. 542

Turn RIGHT, West. Follow street car tracks to end
brick pavement. Next photo seventeen and one-ten
miles, after passing through New Carlisle, fourteen mil
Follow the wires.

No. 541

LEFT, South-West. Cottage ahead on right at turn. xt turn two and nine-tenths miles. Road on right leads Rolling Prairie.

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No. 540

AIGHT AHEAD, South-West. White frame dwelling left. Next photo seven and three-tenths miles.

No. 539

Turn LEFT. Mill on left, go to end of street and tur right, go two blocks. Next photo five-tenths of a mil

Memo .....

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No. 538

Turn LEFT, South. Large hole on right, small lake block ahead on right. Next photo nine-tenths of a mi

No. 537

rn RIGHT, West. Next photo three-tenths of a mile.

mo .....

No. 536

rn LEFT. Next photo three-tenths of a mile.

No. 535

Turn RIGHT, West. Follow the wires. Next photo W
ville, nine miles.

Memo .....

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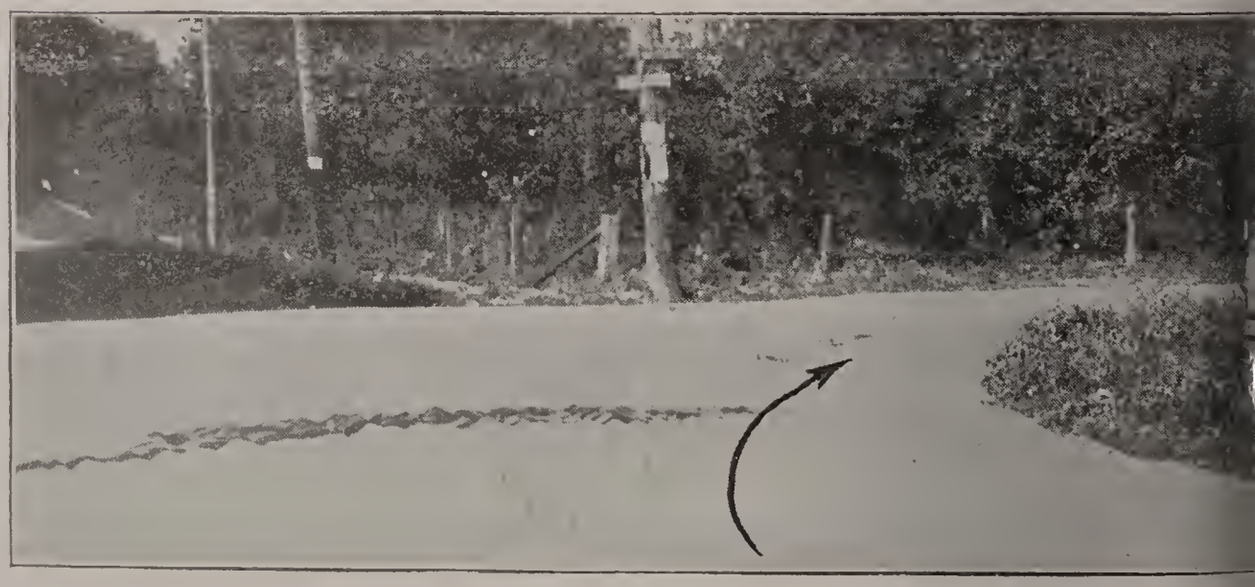
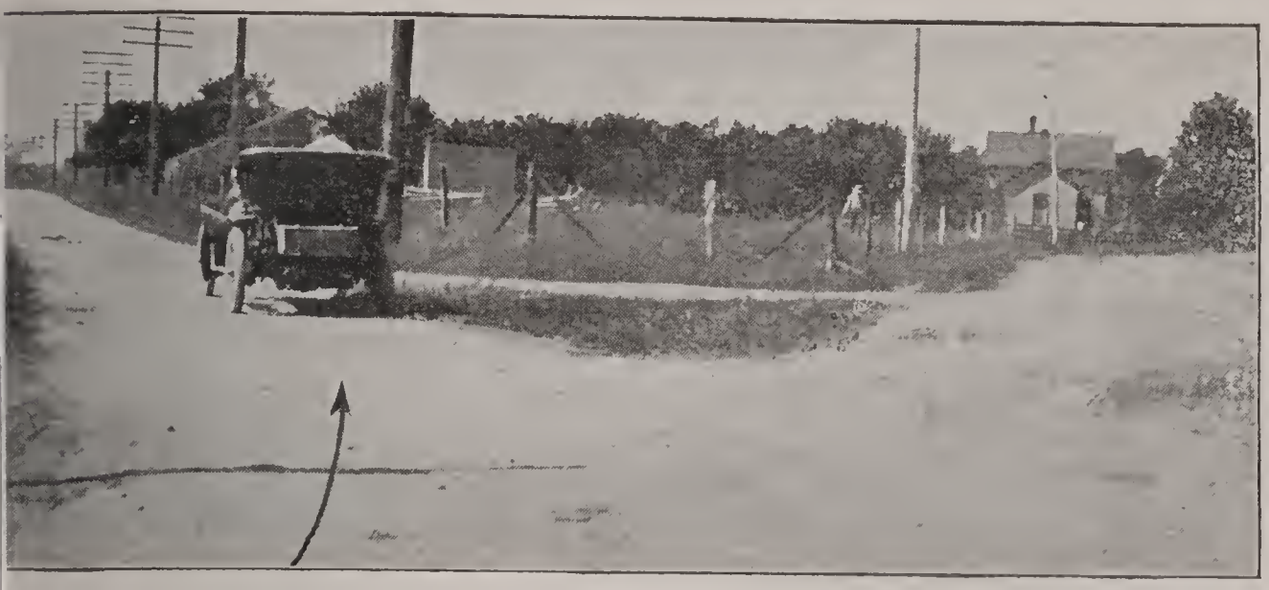
No. 534



WESTVILLE

Turn RIGHT, North. After going one hundred and
feet turn left on Main Street in Westville, keep stra
ahead through town, passing under R. R. embankm
Next photo eight-tenths of a mile.

No. 533



ı LEFT, West, after passing under R. R. embankment. ext photo two and three-tenths miles.

ıo .....

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No. 532

AIGHT AHEAD. Next photo after arriving at end of ıd, turning to left and crossing small bridge, three and e-tenths miles.

No. 531

Turn RIGHT, South-West. After crossing small bridge main on main road. Next turn at cross roads, one three-tenths miles.

Memo .....

No. 530

Turn RIGHT, West. Cross roads. Next turn Valpar two and six-tenths miles.

No. 529

VALPARAISO

RIGHT, North. Go one hundred and fifty feet, then 't on Main Street to end of town, passing railroad depot d viaduct. Next turn one and three-tenths miles. One ock past Court House on same side of street is Hotel fayette. This hotel is the best between South Bend and icago. Special meal arrangements can be made by long stance telephone 991. One block beyond hotel is Zimerman's garage—expert machinists always in waiting. ter hours ring electric bell on side office door.

No. 528

RIGHT, North. Next photo at group of barns and ind mill, two miles.

No. 527

Turn LEFT, West. Wind mills and group of barns on le
Next photo Wheeler, four and seven-tenths miles.

Memo .....

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No. 526

WHEELER

Turn LEFT entering Wheeler. Look out for disguised bum
just beyond turn. Next turn at street's end, five-tenths
a mile. Reduce speed in village.

No. 525

n RIGHT, North-West. Next photo at "S" turn, six-enths of a mile.

no .....

No. 524

ntinue going North after making "S" turn. Follow wires. Next turn at road's end, one mile.

No. 523

Turn LEFT, West. Follow wires. Next turn Hobart, thr
and one-tenth miles.

Memo .....

No. 522

Turn LEFT and go South to street's end, then right. Ne
photo two-tenths of a mile.

No. 521

n LEFT, South. Hobart depot on left, turn right after assing depot. Next turn in Hobart, three-tenths of a mile.

no .....

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No. 520

HOBART

rn RIGHT, North-West. Follow the wires. Next photo Highlands, eleven and three-tenths miles.

No. 519

HIGHLANDS

Turn LEFT, West. Next turn two and three-tenths miles

Memo .....

No. 518

Turn RIGHT, North. Road-house on left. Next turn tw
and three-tenths miles.

No. 517

Turn LEFT, West. Saloon on right at turn. Next turn five-tenths of a mile.

Memo .....

No. 516

Turn RIGHT, North. Next turn at Lafayette School, one and three-tenths miles.

No. 515

Turn LEFT, West. Lafayette School on right. Next tu
one mile.

Memo .....

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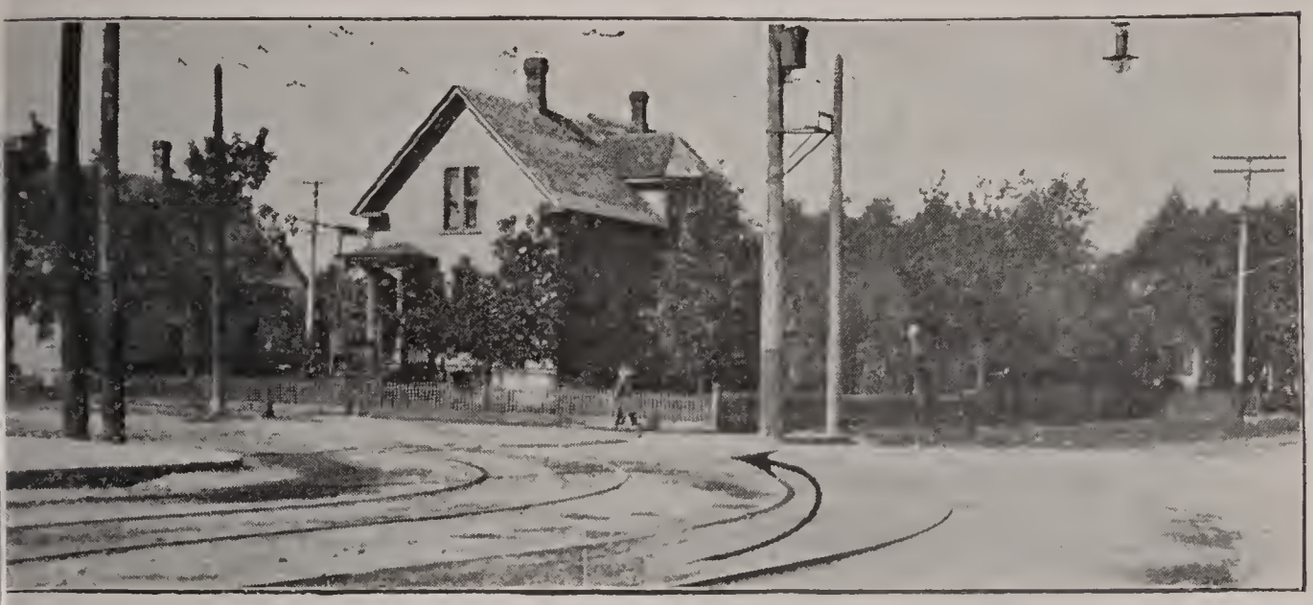
No. 514

HAMMOND

Turn RIGHT, North. Turn right from Sibley Street to H
man Avenue. Half a block beyond turn is the Majest
Hotel and Cafe. The management extends first class hot
facilities to automobile parties. Next turn one mile.

No. 513



ırn LEFT and go West. Go one block west and turn with car tracks. Next turn four miles.

emo .....

No. 512

ırn LEFT, North-West. Follow car tracks to Ewing Avenue, two and one-tenth miles.

No. 511

Turn RIGHT and go North, Ewing and Indianapolis Av
nues. Follow car tracks across bridge to 92nd Street a
Buffalo Avenue, one and eight-tenths miles.

Memo .....

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No. 510

Turn LEFT, 92d Street, South Chicago. Continue
Exchange Avenue. Next photo six-tenths of a mile.

No. 509

rn RIGHT, Exchange Avenue, statue of Columbus on eft. Next photo 83d Street, one mile.

mo.....

No. 508

rn LEFT. Follow macadam to Jeffrey Avenue, one nile.

No. 507

Turn RIGHT, Jeffrey Avenue, follow macadam Nort
Next photo two miles.

Memo.....

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No. 506

JACKSON PARK.

Enter park, turning LEFT upon first drive.

No. 505

urn LEFT. Lagoon and stone bridge on right.

emo.....

No. 504

urn RIGHT. Lagoon on right.

No. 503

Turn LEFT, red-tiled rest building on left. Tennis cou
and Golf links on left.

Memo .....

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No. 502

Turn RIGHT, small police box on left.

No. 501

Turn LEFT, red-tiled boat building on right. Leave park. Continue straight West upon Midway Drive, passing under Illinois Central Railroad viaduct.

Memo.....

No. 500

MIDWAY DRIVE.

Keep STRAIGHT AHEAD, crossing Cottage Grove Avenue trolley, and enter Washington Park, turning right, passing administration buildings of parks on right, follow drive left to long, low building on left. (Refectory.)

No. 499

Keep to RIGHT and North. Refectory on left. Leave park at 51st Street. Grand Boulevard five-tenths of a mile.

Memo .....

No. 498

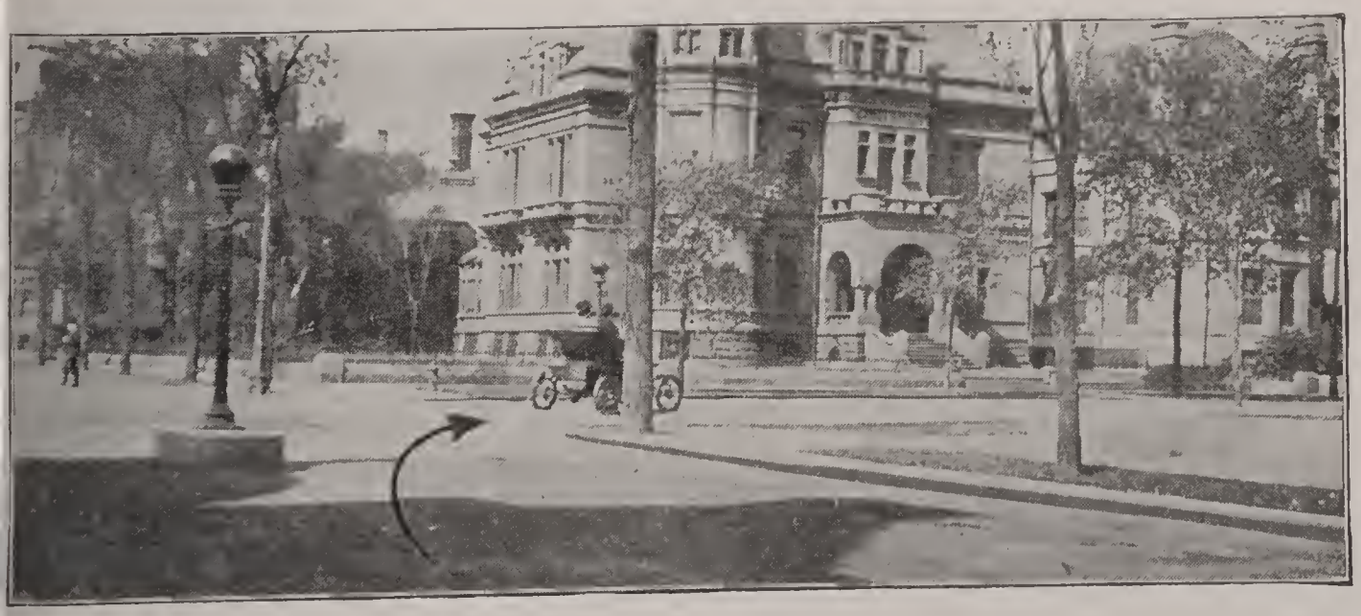
STRAIGHT AHEAD. Leave park at Grand Boulevard and 51st Street, passing statue of Washington. Next turn two miles, South Park Boulevard and 33rd Street.

No. 497

urn LEFT and go West, South Park Boulevard and 33rd Street. Next turn Michigan Avenue and 33rd Street, four-tenths of a mile.

Memo .....

No. 496



urn RIGHT and go North. Michigan Avenue and 33rd Street last turn.

No. 495

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MICHIGAN AVENUE AND 13th STREET, CHICAGO, ILL.

FINISHING POINT of Photo-Auto Maps in Chicago, I is The New Southern Hotel, situated so convenient "Automobile Row," it is really considered the very be Hotel in Chicago for automobile tourists. A more delig ful place for visitors in Chicago could not be conceive Their every convenience and comfort is studiously pr vided for. Splendid Cafe, Restaurant and Grill Roor in connection. Good garage accommodations may had one block south of Hotel.

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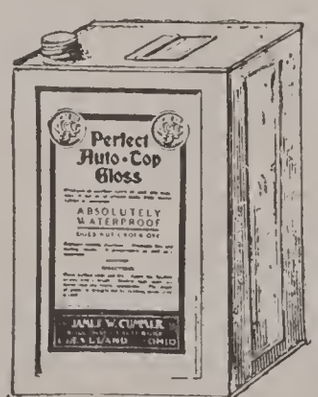

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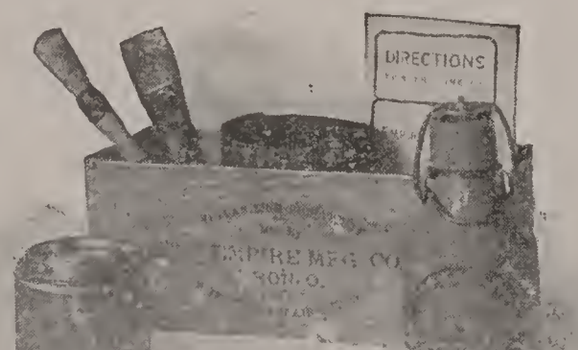

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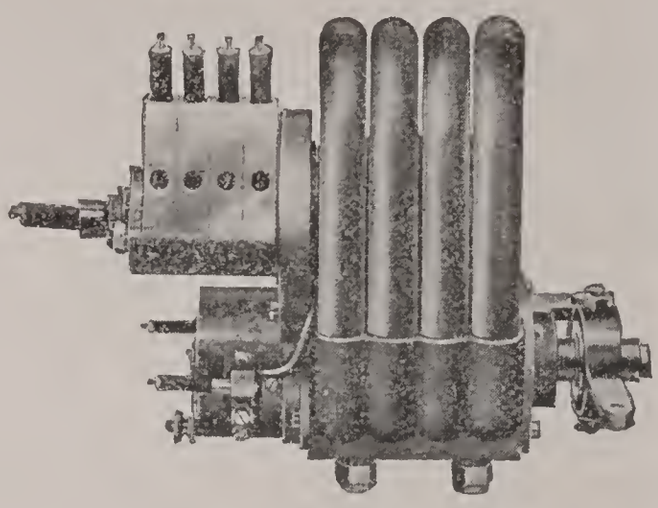

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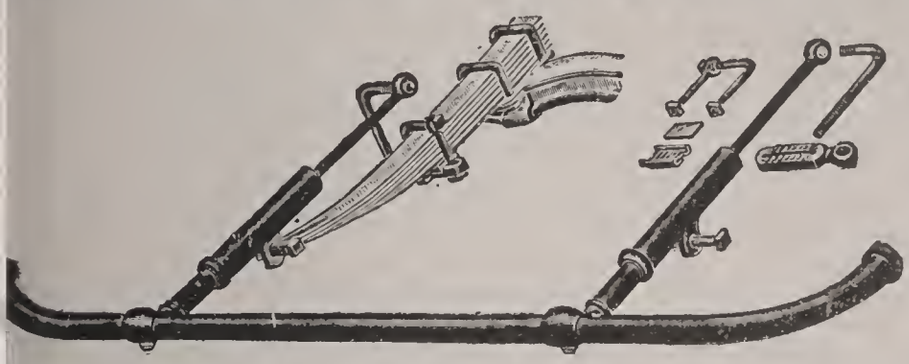

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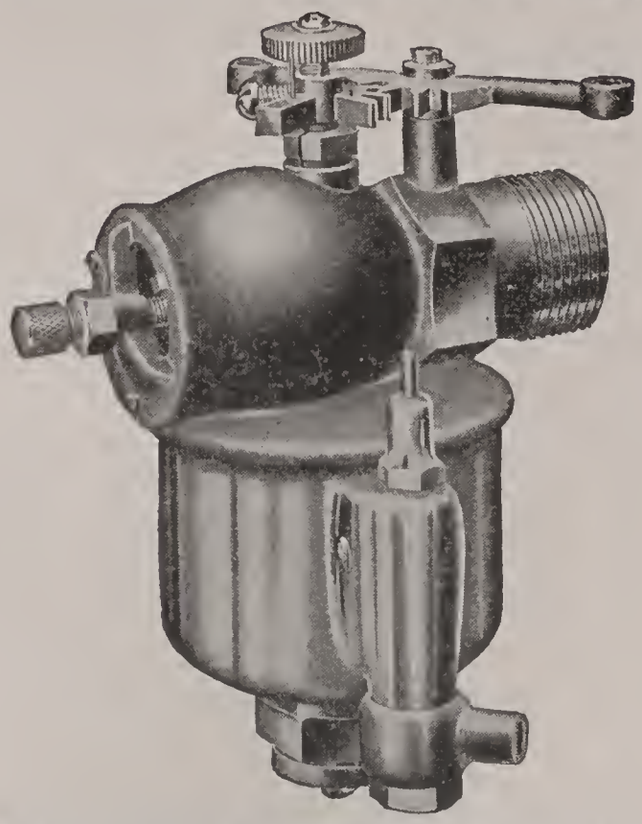

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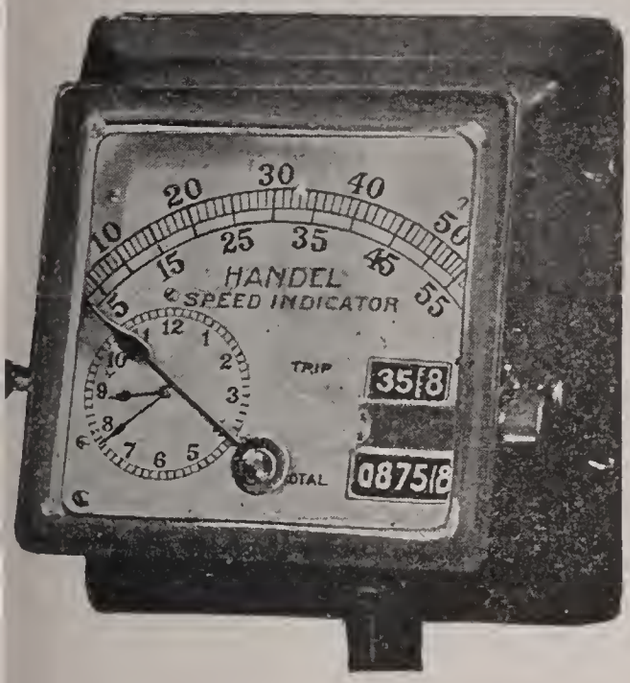

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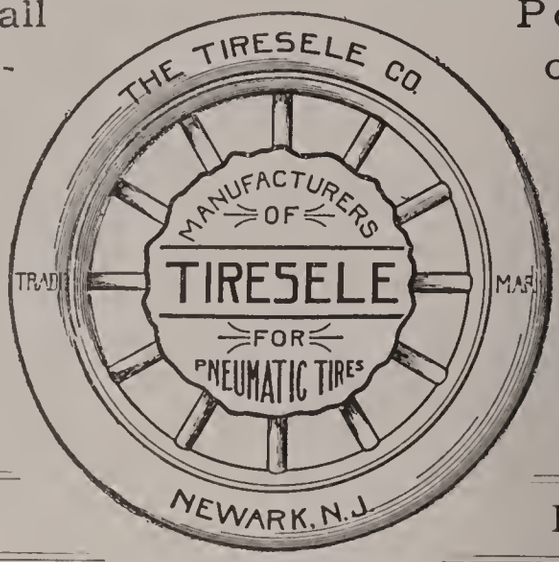

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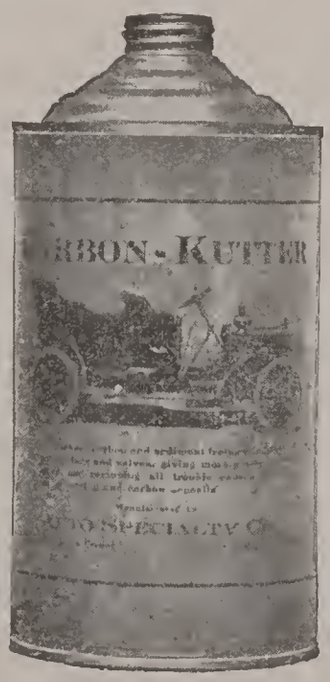

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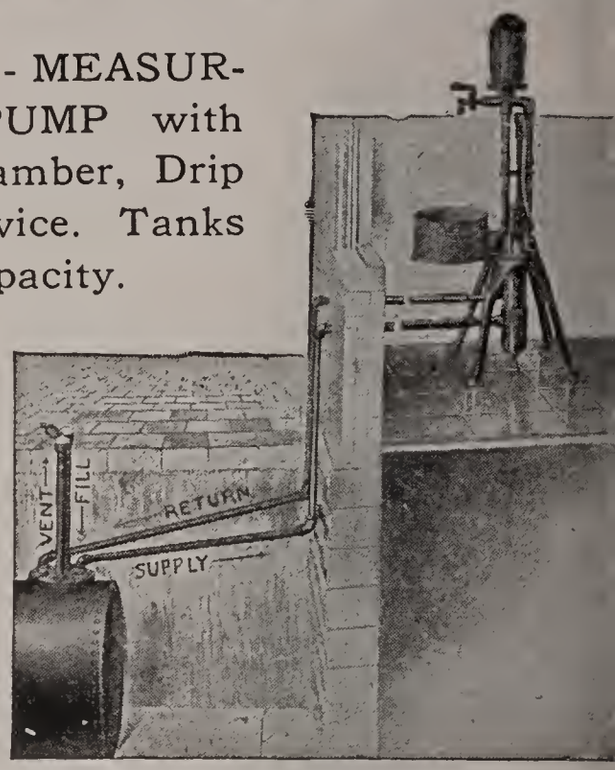


Dome Outfit No. 4.

THE TOKHEIM MFG. CO., CEDAR RAPIDS, IOWA

THE "MULTO" SOCKET RATCHET WRENCH

We make Wrenches all sizes from 5-16 to 5 in. sq., 5-8 to 5 in. hex.

This half-tone is from a photograph, showing our "Multo" Socket Wrench. Each Wrench with its fourteen sockets is packed in a substantial co ered box.

All our Ratchet Wrenches are reversible and work right or left handed at pleasure without removing the Wrench.

All kinds and sizes.

Send for catalogue.

LOWELL WRENCH CO., WORCHESTER, MASSACHUSETTS

The use of "DUFFY'S" proves our claim
"ONCE A GREASE,
ALWAYS A GREASE"

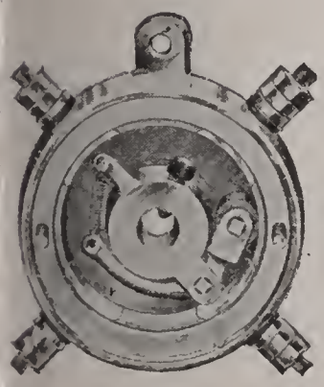
No waste or flushing on the brakes
Not affected by weather conditions
Used wherever a grease is used.

Try it

DUFFY GREASE COMPANY, Inc.
New York, N. Y.

Timers and Distributors

OF EVERY KNOWN TYPE
FOR EVERY KNOWN SERVICE



We are specialists in this line and our experience and manufacturing facilities enable us to turn out large quantities for engine builders and dealers at very attractive prices. Jobbers and dealers write us for prices. Agents wanted in the West and on the Coast.

The Altemus Manufacturing Co.

42d AND CHESTNUT STREETS
PHILADELPHIA, PA.

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Raybestos

FRICTION FACING

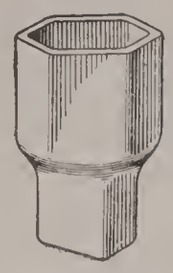
Is made IN ONE PIECE from asbestos.

Is impregnated in such a manner that it is proof against heat, oil and grease.

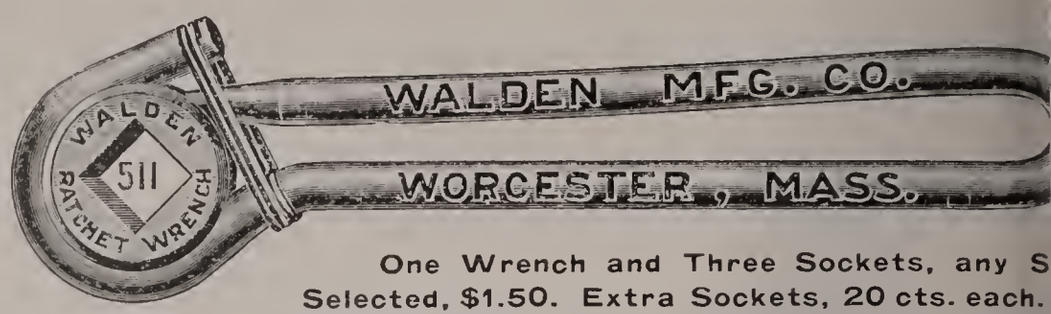
Is an ABSOLUTELY DEPENDABLE Brake Lining. You owe to yourself to see that your brakes are lined with it, if you want to have complete control of your car on the steepest grades.

ROYAL EQUIPMENT COMPANY

176 Housatonic Avenue **BRIDGEPORT, CONN.**



STEEL SOCKETS FIT
No. 511



One Wrench and Three Sockets, any S
Selected, $1.50. Extra Sockets, 20 cts. each.

Hexagonal Sizes Only to Fit Heads	
No. 06	3/8
No. 08	1/2
No. 09	9/16
No. 010	5/8
No. 011	11/16
No. 012	3/4
No. 014	7/8
No. 015	15/16
No. 016	1
No. 017	1 1/16
No. 018	1 1/8
No. 020	1 1/4

THE ONLY THREE-PIECE RATCHE WRENCH. NOTHING TO GET OUT O ORDER. SIMPLEST POSSIBLE TOO THE HANDLE IS WIRE—BUT IT CAN BREAK—IT WON'T BEND—IT WILL STAN THE STRAIN—A STRONG, SERVICEABL WRENCH, THOROUGHLY WELL MAD
Best of Selected Stock; Nickel Finish.

For Tire Lugs			
No. 28	1/2"	Hex.	$ .35 Each
No. 29	9/16"	Hex.	.35 Each
No. 212	3/4"	Hex.	.40 Each

WE MAKE SPECIAL WRENCHES WE WANT YOUR INQUIRIE

TRADE MARK CLEANOLA REGISTERED

TRADE MARK SPE-DE-SHYNE REGISTERED

The Auto Polish of Quality.
Restores the shine and surface to the body, leather trimmings, cushions and top, prolongs the life of the finish and greatly improves the appearance of the car.

The Metal Polish with the Elbo Grease in the Can.
More Polish, Less Work.
Wipes Freely, Contains no Acid.
Imparts a brilliant lustre to all Metal Surfaces.

SOLD BY ALL FIRST CLASS DEALERS IN AUTOMOBILE SUPPL

If your dealer hasn't got them in stock, write us for our

Thirty-Day Trial Offer

THE CLEANOLA COMPAN

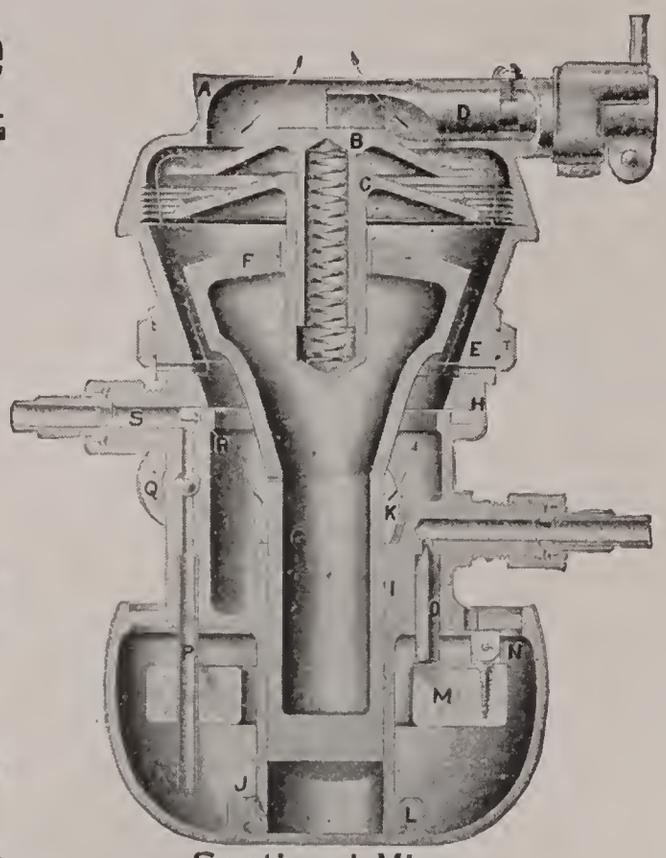
Fulton Building
PITTSBURG, PA.

53 West Van Buren St
CHICAGO, ILL.

New Principle

THE

Stewart Precision Carburetor



Sectional View.

You want the maximum of POWER
on the minimum of FUEL.
You want quiet running and
a UNIFORM MIXTURE at all speeds.

THE

STEWART PRECISION CARBURETOR

will get you these results better than any instrument you have ever used, or your money will be refunded.

NEW PRINCIPLE.

The proportioning of air and gasoline is accomplished by **gravity,** acting on the one moving part, there being no **springs.**

THE RESULT

is a consistent performance at all times. Write for descriptive matter

Alfred C. Stewart Machine Works,

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FOUR GOOD THINGS

MOBO AUTOMOBILE CLEANSER

is made as good as automobile soap can be made. It has a substantial body. Therefore it cleans easily, quickly and thoroughly. MOBO is also absolutely free from uncombined alkali. Because of this it works without injury. These things about MOBO mean much. They mean clean, bright cars, also long life to varnish and paint. Therefore we suggest—try MOBO—in 50c and $1.00 cans.

SHOFO HAND CLEANSER

is made of Castile Soap, powdered Pumicestone and green Olive Oil. These three SHOFO ingredients show a quick, easy and effective working out. To explain, the Castile Soap washes, the Pumicestone scours and the Olive Oil keeps the skin soft. This SHOFO way of hand cleansing is ease, speed and delicacy combined. It is better than all others. Therefore we say—try SHOFO. In 10c and 20c cans.

HYGLO METAL POLISH

is different from all other metal polishes. It is one that eliminates the wait-while-it-dries feature. Also that rub-rub-rub which does tire. Instead the HYGLO way is quick, easy and sure. Then further a HYGLO shine is always even and brilliant, and one also that stays long. In that regard a HYGLO shine is distinctly long-lived, and the only one that is a real all-day shine. 15c, 25c and $1.50 cans.

LEVO WOOD POLISH

is good for cars minus part of the fine varnished finish they had when new. That because LEVO fills in digs and covers up bare spots. At the same time LEVO gives a polish equal to a new coat of varnish, which does not wear off quickly, or come off in washing, because LEVO is an oil preparation and is waterproof. So if your car shows varnish departed, but not enough to warrant the paint shop—Try LEVO, and it will make the car look new. In 25c, 50c and $1.00 bottles.

JOHN T. STANLEY - MAKER - NEW YORK

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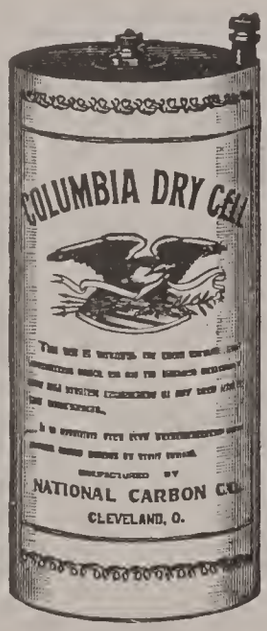
MOTOR CAR SUPPLY CO., 1451 MICHIGAN AVE., CHICAGO



BE GUIDED

by other MOTORISTS and equip your MACHINE with

COLUMBIA

or COLUMBIA IGNITOR

"RED TOP" dry cells.

Don't accept SUBSTITUTES which may spoil your trip. INSIST on getting COLUMBIA cells. They cost NO MORE.

No Extra Charge for Fahnestock Clips

NATIONAL CARBON COMPANY CLEVELAND, OHIO

On Dunlop Type

Over 8,000 miles with a 'adillac on Diamond Dun-op type tires and no tire rouble at all. That's what think of the Diamond Dunlop Style of tires.

R. W. Emerson,
Central City, Ia.

What's Your Car ?

On Fisk Type

My experienee with Diamond Fisk Type or "bolted on" tires on my Stevens-Duryea has been so satisfactory that I shall certainly have none but Diamond in future.

N. L. Ely,
Peekskill, N. Y.

Big or Little

Diamond

Heavy or Light

WRAPPED TREAD TIRES ARE FOR YOU

On a Large Car

I can well imagine that ou receive many testi-nonials for Diamond tires, ut I wish to add mine—hat Diamond tires on my 'eerless Car have been othing short of extraor-inarily fine.

Fred Hoke,
Indianapolis.

Much Better

Cost No More

Quick Detachable
Regular Clincher
Mechanical (Dunlop)
And Fisk Types

On a Light Car

As a physician using a runabout in practice, I drive the car very hard and the tires must bear the brunt of it. Am pleased to say I find Diamond tires much better than all the others I have used.

(Dr.) S. A. Muta,
West Orange, N. J.

Ask For Our Tire Instruction Book — It's Free

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All supply houses sell

DYKES'

Never Kreep

Tire Shoes

This shoe is specially prepared with a cement coating, ready for instant use. Clings to inside of casing, same as if vulcanized.

John L. G. Dykes Co.
CHICAGO, U. S. A.

HAZARD OF NIGHT DRIVING

is reduced to the minimum only if you use reliable burners. The safety of both car and passengers depends then on this apparently unimportant little unit. "A chain is no stronger than its weakest link." No matter how good your lamps or gas supply, unless you have the best burner procurable. When your lamps are new from the factory, they are equipped with some style of Alco burner, for all important lamp makers use ALCO. Then why not insist on Alco again when replacing broken and worn out burners? All dealers sell—we do ***not*** sell to consumers direct.

Ask Dealer.

Alco DeLuxe Genuine German Lava. All gas sizes. Hexagon base (Pat. Dec. 24, 1907) permits easy installation with wrench or pliers.

AMERICAN LAVA COMPANY
CHATTANOOGA, TENN.

Always See the Road

Have a **Williams Shield** put on your car while stopping over night

1910

A Touring Car Shield When Top is Up — A Roadster Shield When Top is Down
All in One — Fits All Cars — Nothing Like It

20th Century Motor Car Supply Co. ... Sole Mf'rs.

Garage Department one block from Oliver Hotel. Open day and night. Machine Shop and Supplie

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NEVER MIND THE PUNCTURE

THAT CAN BE REPAIRED WHEN YOU GET HOME

A Detroit Emergency Wheel

attached to the rim of the wheel carrying the disabled tire, will enable you to drive for miles

EASY TO PUT ON — **LIGHT WEIGHT** — **REASONABLE PRICE**

Can be attached in less than one minute without removing the punctured tire

Ask Your Dealer for the ***Detroit*** Emergency Whee

SPECIAL

Ford Magneto = = $25

For **Ford Models N. R. S.**

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es the work as well as any $75 Magneto. Does it far better than any cheaper Magneto. No cial coil required. Works with your present equipment. Brackets and everything neces- y for installing furnished. The only Magneto backed by a 30-day free trial. Not an experi- nt There are thousands in use. Write for catalog M. Which have you, Ford or Maxwell?

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IRES REPAIRED and VULCANIZED

Blowouts repaired. Sectional repairs made. Casings retreaded and recovered. Tube punctures vulcanized. Motor cycle tires repaired.—We give you a SQUARE DEAL and YOUR MONEY'S WORTH. We can guarantee our repairs, because we use the best materials, employ efficient workmen, and operate our well-equipped shop under up-to-date methods. **We Sell New Tires.** Our Aim is Our Motto: "Right and Reasonable."

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Means the Best of Its Kind At Any Price

ALL LIVE DEALERS CARRY THE LINE

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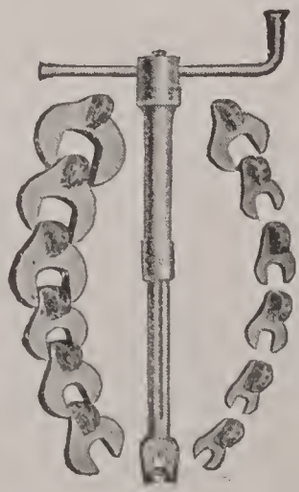
THE DUCK BRAND CO. =:= CHICAGO

REX Adjustable Wrench Sets

Extension Ratchet handle; Interchangeable heads; adjustable instantly to any position. Fits any nut, bolt or cap screw, square or hexagon, on any machine. All parts drop forged from high carbon steel and **ABSOLUTELY WARRANTED** against breakage.

YOU NEED THIS WRENCH



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THE WORD Thermoid
MEANS THAT GOODS SO BRANDED
ARE ABSOLUTELY CORRECT

Thermoid
BRAKE BAND LINING

Thermoid
TIRES AND INNER TUBES
MANUFACTURED BY THE
Thermoid RUBBER COMPANY
TRENTON, N. J.

THE ROAD TO SATISFACTION

Equip your car with the GRAY AUTOCHIME. The Pioneer and Aristocrat of exhaust-blown signals. Some unscrupulous jobbers and dealers are offering imitations at prices from $4.00 up. The Autochime sells for $10.00. It's more than worth the difference.
See the name on the bell.

GRAY-HAWLEY MFG. CO. DETROIT, MICH.

Superior Motor Car and Motor Boat Accessories

DIXON'S GRAPHITE MOTOR LUBRICANTS

Supply lubrication for practically every part of the car; cylinders, transmissions, differentials, bearings, etc. The service these lubricants render is due to DIXON'S TICONDEROGA FLAKE GRAPHITE — the finest lubricating graphite the world produces. Use Dixon's and increase your car's efficiency.

JOSEPH DIXON CRUCIBLE COMPANY, Jersey City, N. J.

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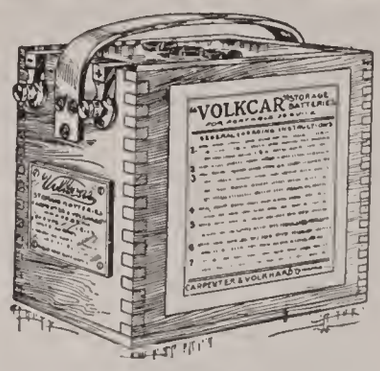
YOU WILL NOT FIND A STORAGE BATTERY TO EQUAL THE

VOLKCAR

TRY ONE AT OUR EXPENSE



CARPENTER & VOLKHARAT

2443 MICHIGAN BOULEVARD, CHICAGO, ILLINIOS

THE PRINCIPLE OF THE

PETRE CARBURETTER

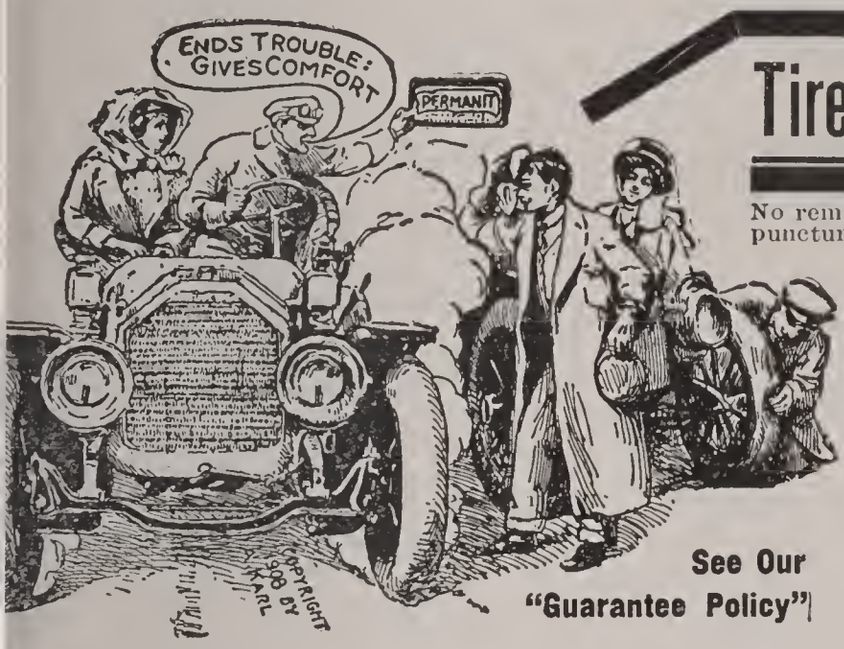
is exclusive. No other carburetter on the market has an automatically controlled needle valve which apportions the exact amount of gasoline for the given amount of air, making the **quality** of the mixture **constant,** whether running five or fifty miles per hour, up or down grade.

Notice that the needle valve and the air inlet are so affixed to the **same lever** that any movement of the air valve gives a correct and proportionate movement of the gasoline inlet, thus insuring a perfect mixture at all times, under all conditions.

The Petre Carburetter is guaranteed to

1. Start your Engine not later than the 3d quarter turn.
2. Give Greater Flexibility in Slow Running.
3. Greater Speed—By increasing **Quantity,** without changing the **Quality** of the mixture.
4. Greater Power in Hill Climbing—Same reason.
   (25 per cent. more power on topping a hill—and we can prove it.)
5. More Mileage—Less Consumption—Mixture is never too Rich.

THE PETRE CARBURETTER CO.
1839 Euclid Ave., Cleveland, O.



See Our "Guarantee Policy"

Tire Problem Solved!

No remedy has been found that would heal punctured tires without injuring the rubber, until "PERMANIT" was discovered and put in practical use.

"Permanit"

is imported from Europe and in use there for years and now in this country on the market for over a year and a half.

See what our customers say about it:

A prominent physician and ex-president of the Board of Trade writes:

"My Dear Sirs—I have used the auto car in the tires of which you put the material you call "PERMANIT," since November 21, 1907. It has not been necessary to pump up the tires since, although we have taken out of the tires several nails, tacks and pins. It appears to me to do the work."

We have many more similar to this and which are open to your investigation.

Refuse substitutes—let someone else try imitations **Why buy imitations when we can furnish you with the genuine?** Do not run any risk by trying something which has not been **fairly tested to stand all kinds of weather and roads.** "PERMANIT" has stood all these severe tests.

Sounds unbelievable, but it really does it. Besides, keeps the tires in good condition and increases their life.
Demonstrated before Board of Governors Harrisburg Motor Club with great success.
In your own interest write today and get full particulars and price and discounts to dealers, or send 53c for a sample carton which is sufficient for a bicycle tire.

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Ignition Plugs Stay Right The Longe

TRADE MARK REG. U. S. PAT. OFFICE

No. 4A. Half-Inch Separable Double Porcelain
Price - $1.25

"VULCAN"

TYPE OF STA-RITE PORCELAIN IGNITION PLUGS

Metric, No. 6, Single, Adjustable Sparking Point.
Price - - $1.25

A. L. A. M., No. 8A, Separable, Outside Sparking Points. ⅞-inch—18th. Original Autocar size. Price - $1.25

Winton, No. 15 A.
Price - - $1.25
Extra Long.

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Porcelain Tube and Cap with Bolt, Point, Packings, Nuts and Springs. 50 cts.

With our double porcelains, the contraction and expansion is uniform, and cap protects inner heated tube. Practically no breakage or leakage with "VULCAN" STA-RITES.

GUARANTEE:
We agree to repair, free of charge, perpetually, any Sta-Rite Plugs returned to our factory, at any time.

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Metric, No. 48. French Metric. Separable, Outside Sparking Points. Copper Gasket Spun over shoulder.
Price - - $1.50

Thor, No. 51. Same as No. 48, except with special long bolt to fit Thor Motorcycle terminal. Price - $1.50

Hedstrom Plug for Indian Motorcycles. Price - $1.50

Mica Insulator, complete, threaded to fit Nos. 28A, 32A, 48, 51 and Hedstrom.
Price - - $1.25

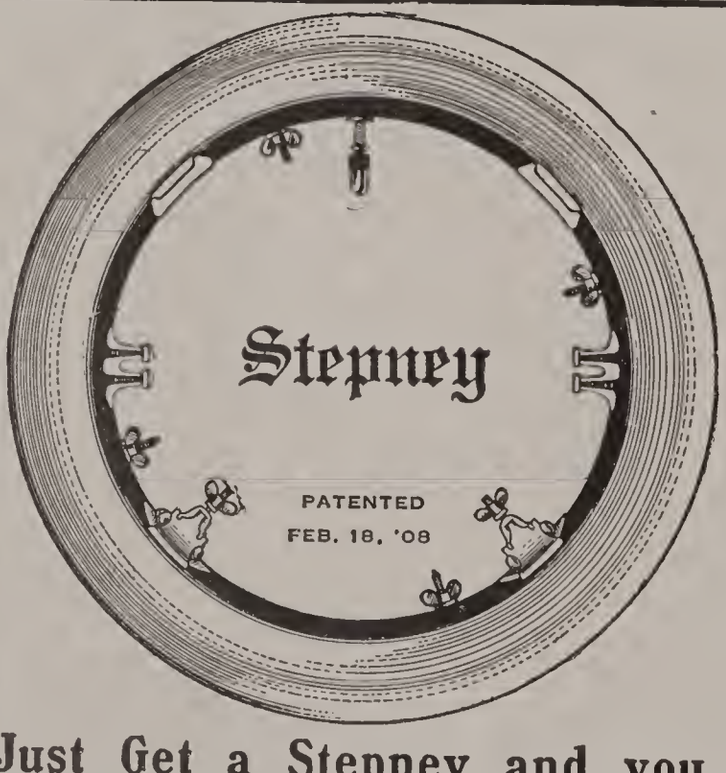
All "Venus" Sta-Rite Mica Plugs are constructed with solid bolts from Bessemer steel rod, which do not stretch, and mica does not loosen. The inner India mica core is made with no shellac or other sticking substance. The perfect mica washers are compressed under great pressure, and machine turned to a finely glazed surface, which with ample air space is practically soot and waterproof, and cannot be broken in service.

No. 32 A.
Half-Inch Separab
Price - $1.

THE R. E. HARDY COMPANY

INCORPORATED 1900

Factory, 201 37th Street, BROOKLYN, N. Y. **Fisher Building, CHICA**



Get a Stepne
And Get There-
Anywhere

No matter what kind of roads y have to travel, and no matter wh kind of pneumatic tires you ride o you are liable to have a puncture blowout at any time. If you try repair it on the road, it takes ti and work--dirty work, too. If y continue your journey witho attempting to mend the tire you w ruin it, and tires cost money.

Just Get a Stepney and you Won't Have to Do Eithe

you won't even soil your hands. Simply attach it to the rim of the injured tire. An body can do it. One use of the *Stepney* usually pays for the device, but it can be us interminably. **Ask for the *Stepney* anywhere, and *get* it, or write for Catalog "A**

Spare Motor Wheel of America, Ltd

GEO. S. MORROW, Sales Manager

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The IMPERIAL

Non-Explosive Gasoline Tanks

One of the most important features in storing explosive liquids is the question of Safety

The IMPERIAL Non-explosive Tank is safe in **every** particular. It is scientifically impossible to explode any tank or can fitted with our non-explosive devices. Our tank is just as safe above ground as the other tanks that are buried.

Our over-ground system lasts ten times as long as the buried tanks, you get no water in your gasoline by your tank absorbing dampness from the ground or from sweating.

Write for our catalogue and full particulars.

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EMPIRE AUTOMOBILE TIRE COMPANY, Trenton N. J.

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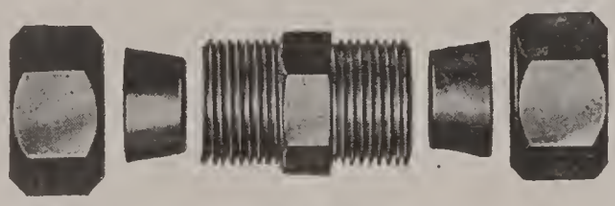

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COMPRESSION COUPLINGS

For connecting Copper, Steel, Brass and Aluminum tubing, without soldering, without flaring, without cement, or solder, especially adapted for Automobiles, Motor Boats and Gasoline Engines.

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Write for Samples and Prices.

Imperial Brass Mfg. Co.

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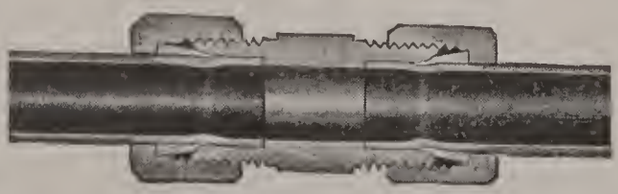

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REG. U.S. PAT. OFF.

TIRE SLEEVES

They are an "ever ready" relief for blow out troubles.

Heat and cold, mud and water, will not injure them.

Made in three sizes, viz:

No. 1. For 3-inch tire.
No. 2. For 3½-inch or 4-inch tire.
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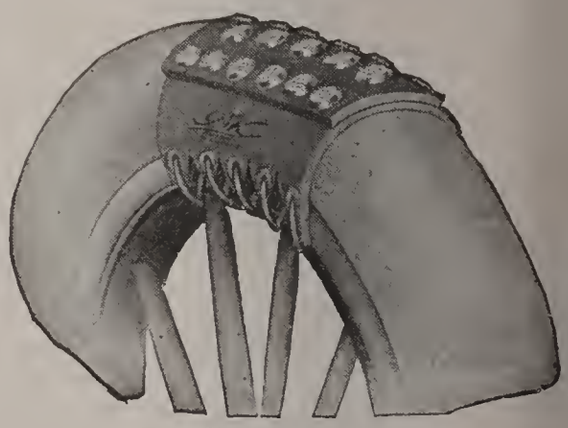

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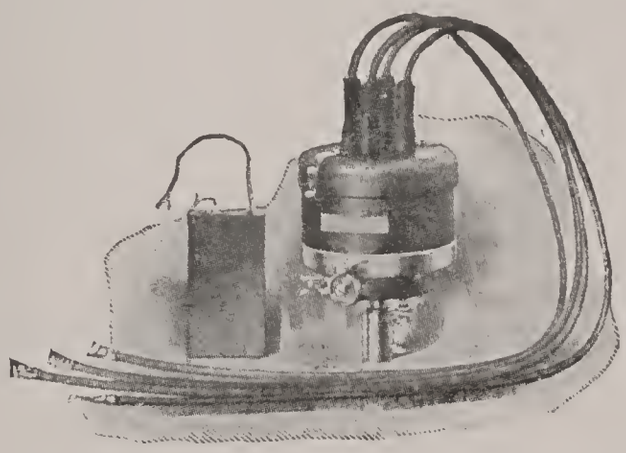

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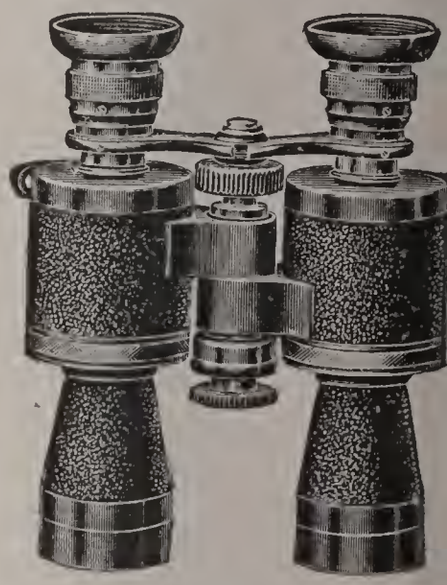

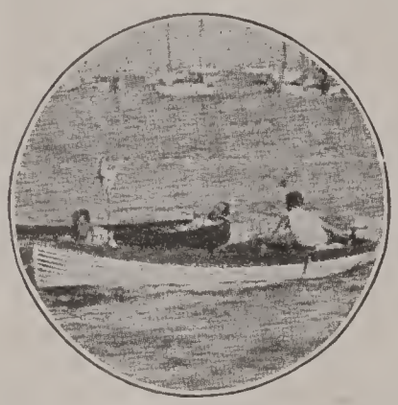

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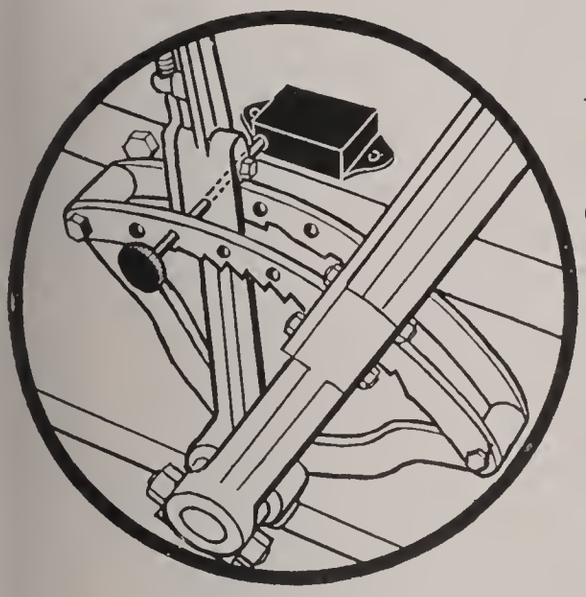

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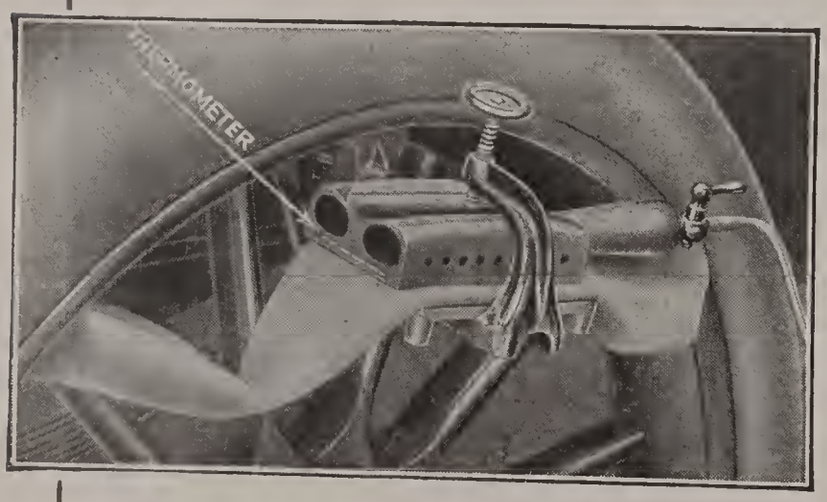

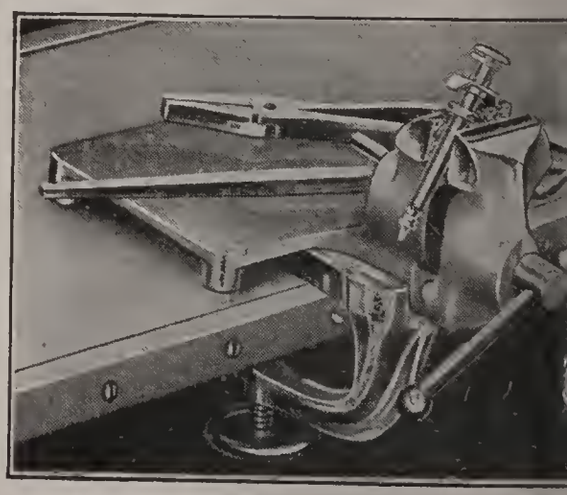

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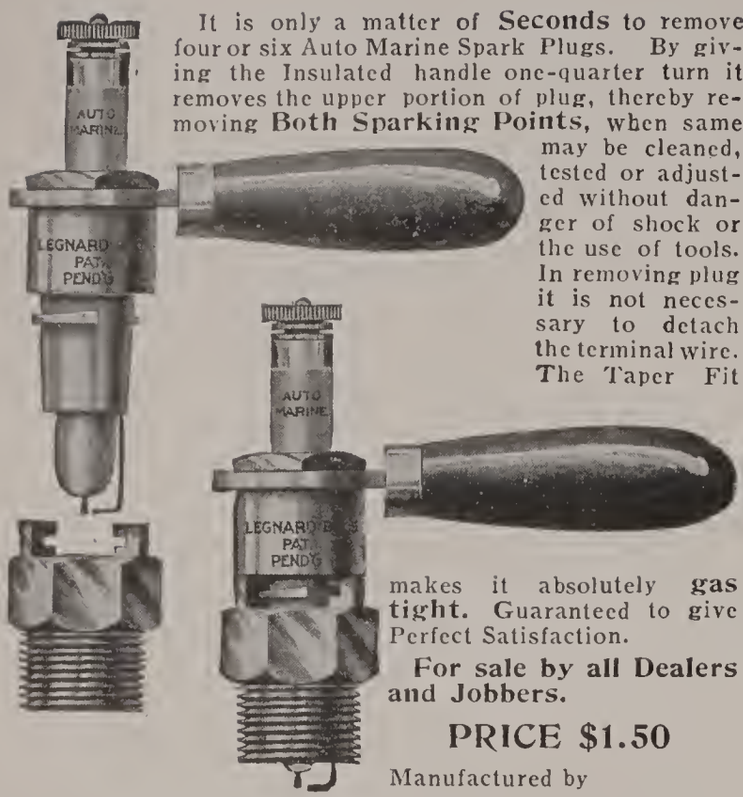

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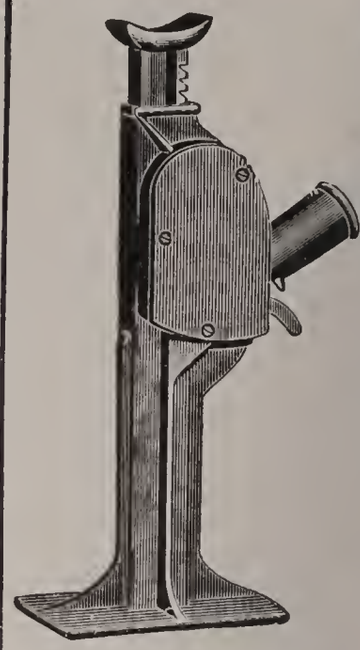

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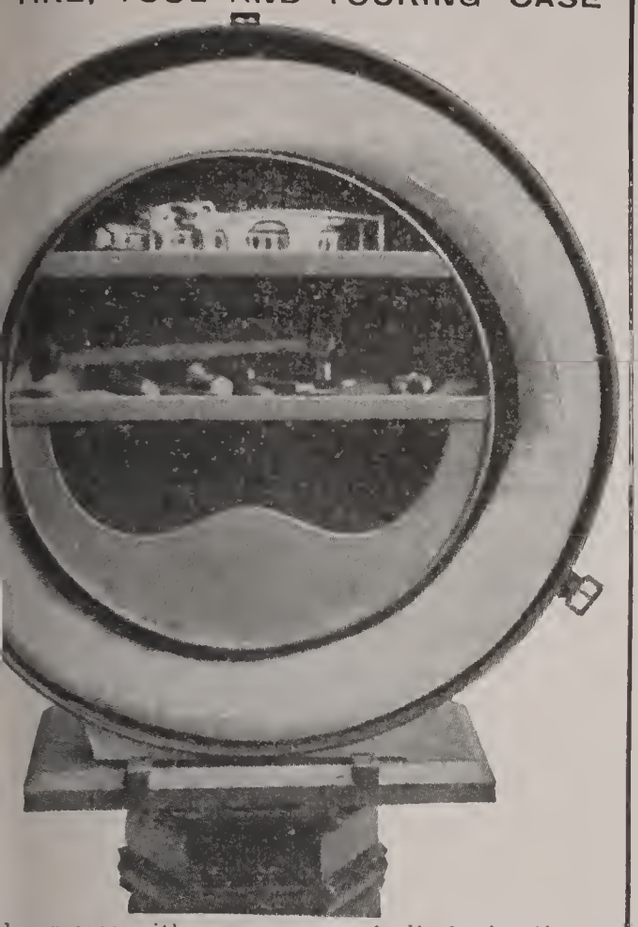

hows case with cover removed, displaying tires, ols, etc. The lower space within the circle holds s, gloves inner tubes—or any articles used in tour- tire space takes two shoes, the upper spaces a full pment, thus doing away with all other appliances ing extras. The cost of the Dow Tire and Tool uch less than that of the many pieces of equipment this case is not used on your car. Patent pending.

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This Sireno Electric Horn is so flexible that by varying the pressure on the switch you can produce a gentle purr for the city streets, or a blast that can be heard over a mile away in the country.

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The Sireno is reliable, for it is operated by the regular six-volt ignition battery. It is independent of the engine—never fails to work—doesn't drain the ignition battery. And if you have a magneto, any six-volt battery will run the horn. The Sireno is built of the best materials and is beautifully finished. It is light—compact—easily put on your car in a few minutes.

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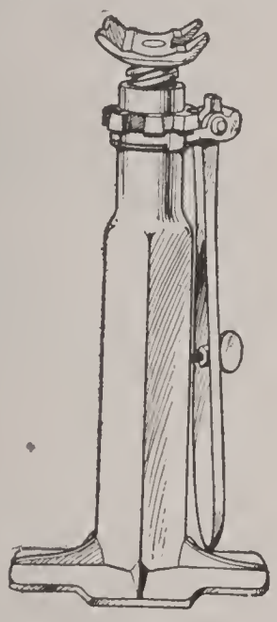
AND ATLAS AUTO JACKS

Patent Allowed.



Atlas Nos. 1, 2, 3. U. S. Jack No. 1.

t over all, No. 1 10 inches. No. 2, 11 3-4 inches.
o. 1. 5 lbs; No. 2, 6 lbs.
ever has an up and down motion. It is slotted at as to move in or out, to engage from 1 to 4 teeth eel.
ad revolves on the end of the screw so that the be worked at any angle or in cramped places. The he truss brace, round or square axle.
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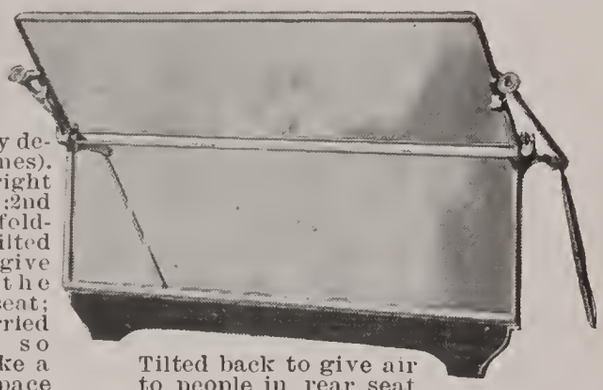
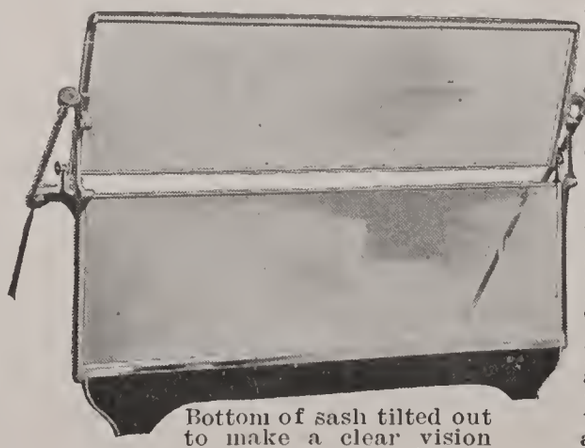
Col. Sprague's New Air Cushioned "Leader" Wind Shield.



Tilted back to give air to people in rear seat and still keep out storm.

It can be rigidly held in four positions (the only desirable ones). 1st. Upright or closed; 2nd Down or folded; 3d. Tilted back to give air to the back seat; 4th. Carried forward so as to make a clear space between the upper and lower sash, so you can see your way in rainy weather. Our air-cushion locking device works easily and positively and holds the shield rigidly in each of the above positions. It cannot get out of order.



Bottom of sash tilted out to make a clear vision space in case of rain and still keep out the storm.

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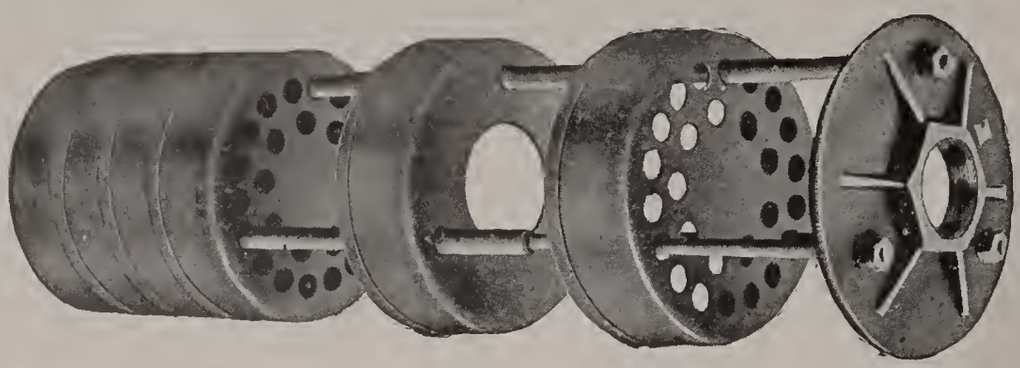

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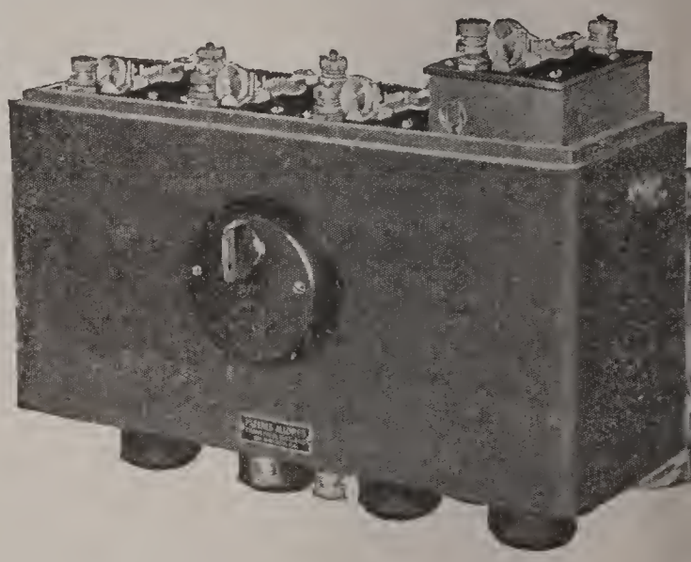

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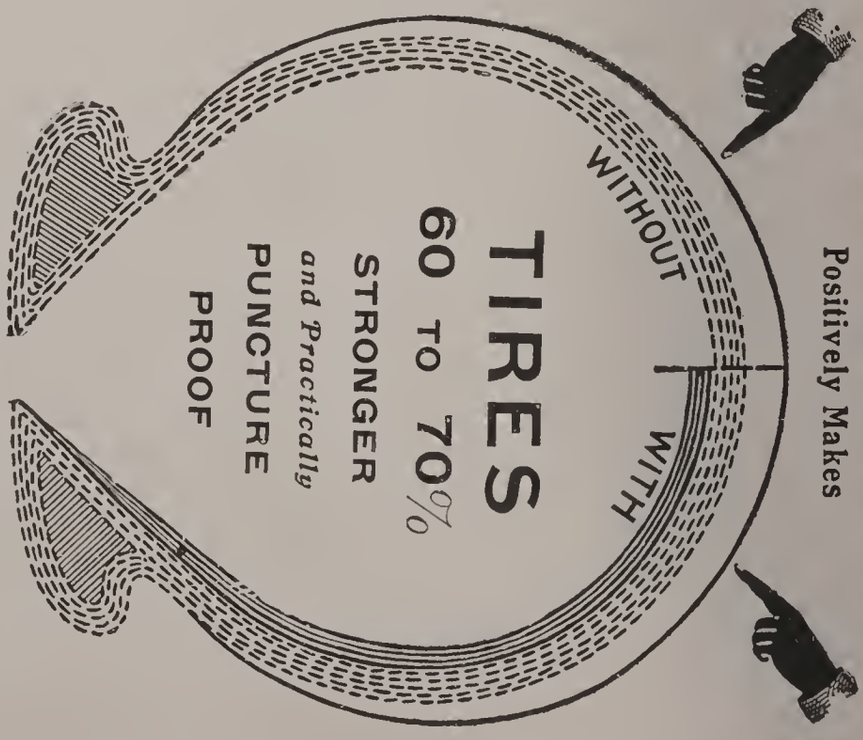

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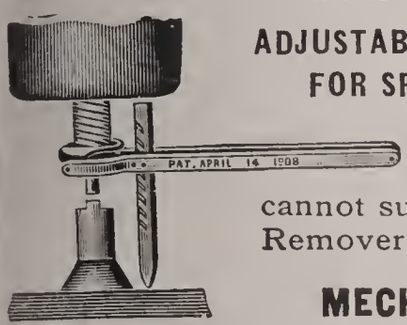

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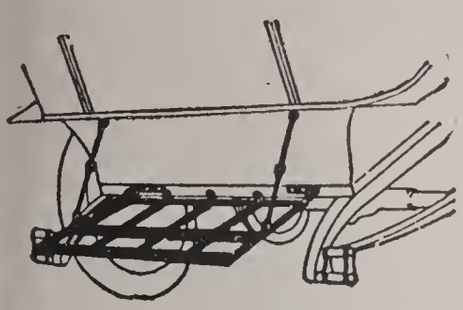

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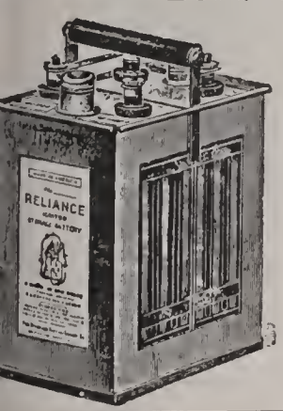

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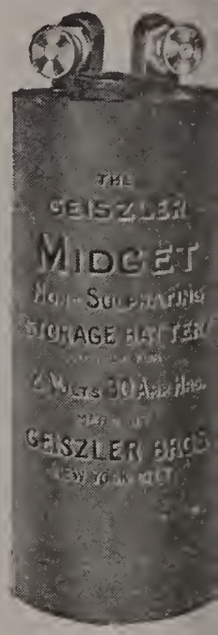

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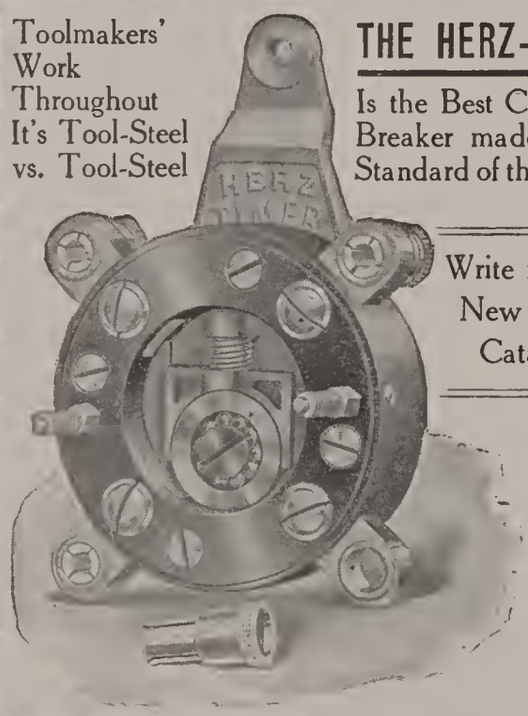

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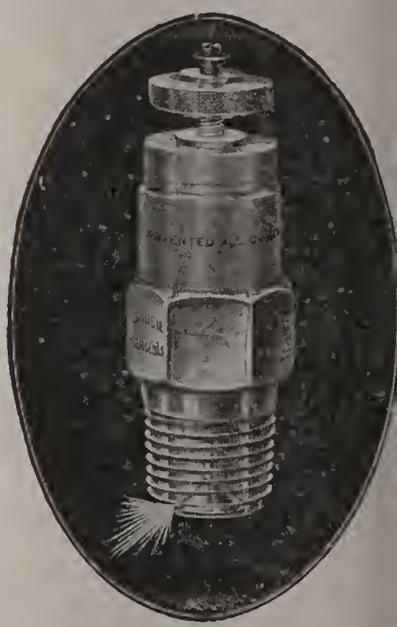

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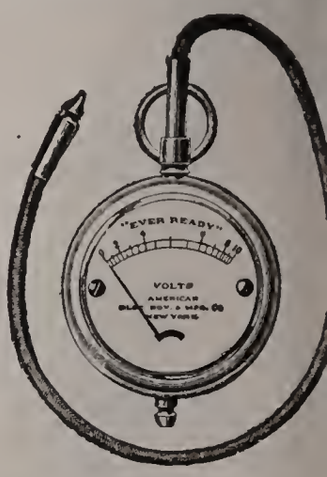

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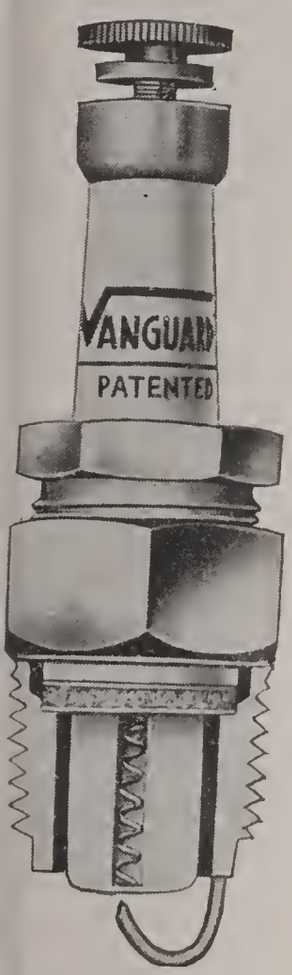

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the central firing pin or point has been eliminated and the spark is forced to a connection with spiral platinum wire encased in porcelain through a microscopic aperture that does not permit even air to enter.

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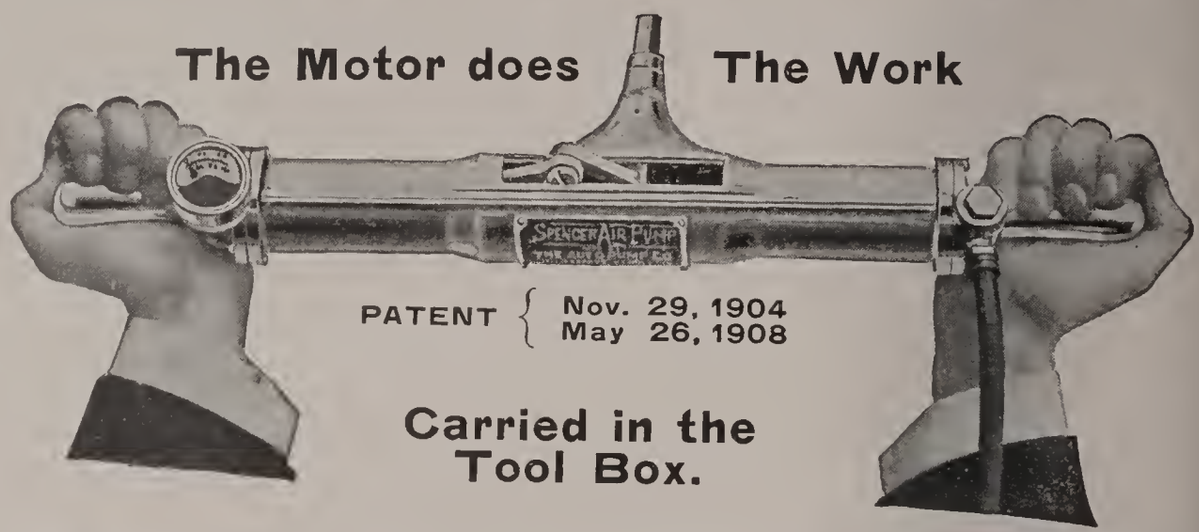
The Motor does The Work



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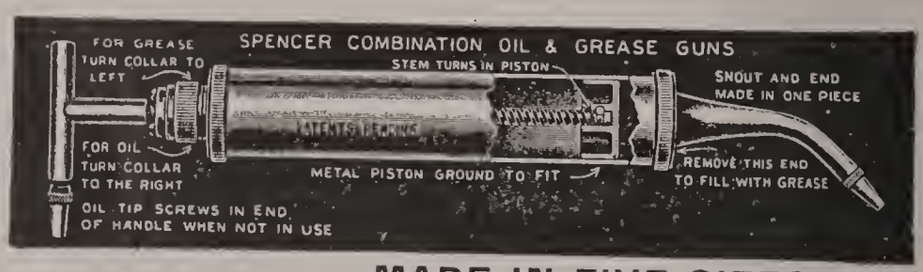
Carried in the Tool Box.

This Pump is built like a high-grade engine, cylinder, pistons and piston rings, ground to the thousandth part of an inch. There are no leather packings to dry or wear out. It will inflate your tire in two minutes, saving time and labor. It will increase the life of your tires by keeping them properly inflated.



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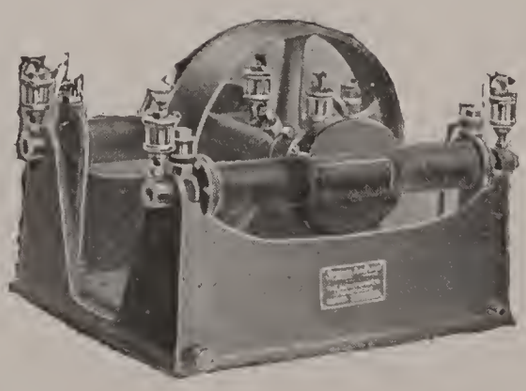

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It will give a high pressure and large volume, and will do the work of a pump costing twice the money.

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Fits Neat
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Buttons on the tread
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or to-morrow or next day. Then you'll need Weed Chain Tire Grips. And you'll need them badly. There is only one way that you can be positively sure that your car is not going to skid off the road, and that is — by using

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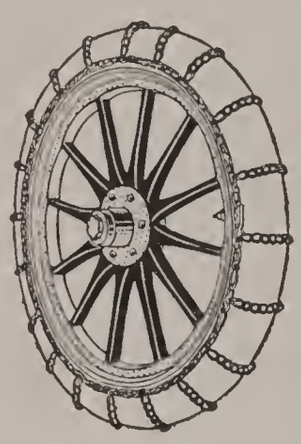

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Every owner of an Automobile needs a

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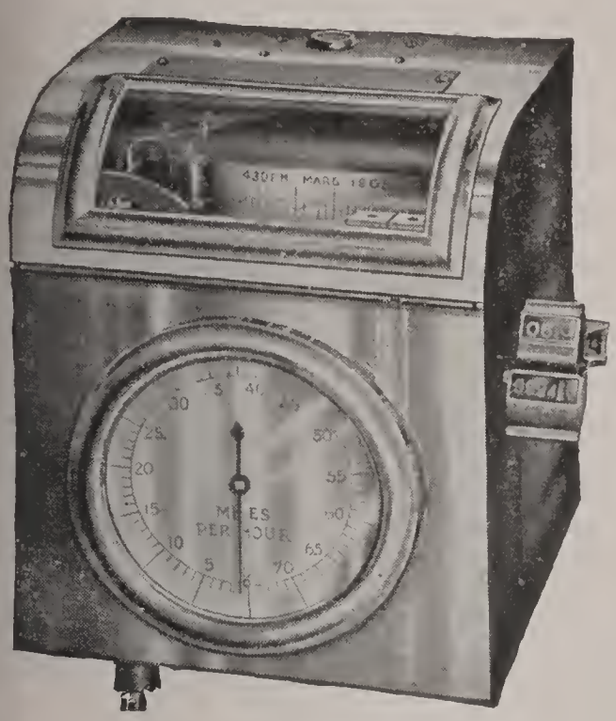

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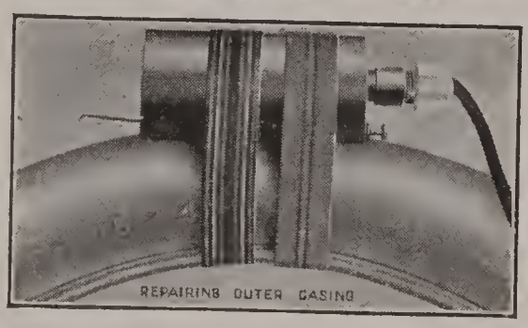

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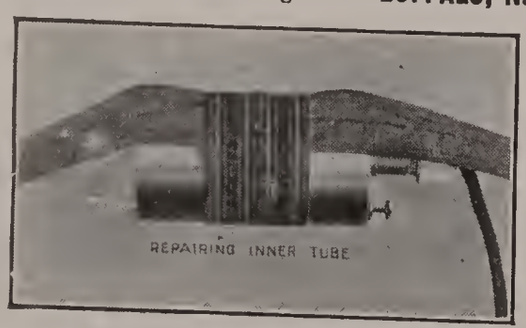

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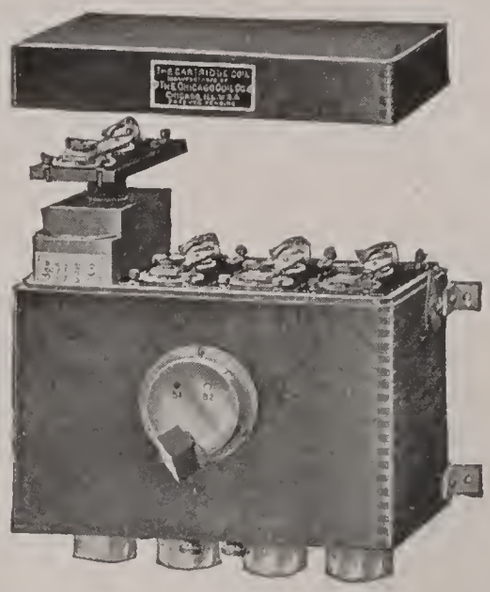
No units to throw away. Economical on current. Has the switch with a memory which saves platinum wear and is in every way a superior article.



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Factory: Chicopee Falls, Mass.

In Actual Brake Tests this Plug has shown Greater Horse Power than any other

John B. Anderson, M. D.

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Yours very truly,

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